# Advanced GeoEnvironmental, Inc.



19 October 2005 AGE-NC Project No. 99-0645

Mr. Nicholas Bokides MEL BOKIDES PETROLEUM INC. P.O. Box 7747 Stockton, California 95267

**Subject:** Quarterly Report - Second and Third Quarters 2005

Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

Dear Mr. Bokides:

At your request, *Advanced* GeoEnvironmental, Inc. has prepared the enclosed quarterly report for 8203 East Highway 26, Stockton, California. The scope of work included operation, maintenance and sampling of a soil-vapor extraction system, quarterly ground water monitoring and preparation of this report. Electronic copies of this report will be forwarded to Ms. Margaret Lagorio of the San Joaquin County Environmental Health Department (EHD) and to Mr. James Barton of the Regional Water Quality Control Board - Central Valley Region (RWQCB).

If you have any questions or require further information, please contact our office at (209) 467-1006.

No. 7473

Sincerely,

Advanced GeoEnvironmental, Inc.

William R. Little

Senior Project Geologist

California Professional Geologist #747

cc: Ms. Margaret Lagorio, EHD

Mr. James Barton, RWQCB

19 October 2005 AGE-NC Project No. 99-0645

PREPARED FOR:

Mr. Nicholas Bokides MEL BOKIDES PETROLEUM INC.

PREPARED BY:



### Advanced GeoEnvironmental, Inc.

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19 October 2005 AGE-NC Project No. 99-0645



Advanced GeoEnvironmental, Inc. 837 Shaw Road, Stockton, California

No. 7473

PREPARED BY:

William R. Little

Senior Project Geologist

**REVIEWED BY:** 

Daniel W. Kalmbach Project Geologist

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#### 1.0. INTRODUCTION

At the request of Mr. Nick Bokides of Mel Bokides Petroleum (MBP), *Advanced* GeoEnvironmental, Inc. (AGE) has prepared this quarterly report for the property located at 8203 East Highway 26, Stockton, California (site). The scope of work included operation, maintenance and sampling of a soil-vapor extraction system, quarterly ground water monitoring and preparation of this report. The report was prepared in accordance with guidelines issued by the California Regional Water Quality Control Board - Central Valley Region (RWQCB) for subsurface investigations of former underground storage tank (UST) systems. The site location and site plan are illustrated on Figures 1 and 2, respectively; site background information is summarized in Appendix A.

Four soil-vapor extraction wells (VW1A, VW1B, VW2 and VW3) have been installed at the site, one well (VW1B) screened in petroleum hydrocarbon-impacted soil and the others screened in clean soil; however, based on individual SVE well feasibility testing, AGE determined that well VW1B should adequately capture soil-vapor to mitigate the adsorbed hydrocarbons at the site, while use of the remaining wells have demonstrated counter-productive results.

### 2.0 PROCEDURES

All field work procedures and reporting requirements are in accordance with guidelines issued by the RWQCB for subsurface investigation of underground storage tank (UST) system sites and the San Joaquin County Environmental Health Department (EHD) for sampling of ground water monitoring wells. The operation and monitoring of the soil-vapor extraction system was in accordance with the EHD approved, AGE-prepared *Soil Remediation - System Design*, dated 01 September 2004.

### 2.1. SOIL-VAPOR EXTRACTION SYSTEM

Well VW1B had been piped directly to the soil-vapor extraction unit (SVE) located within a fenced enclosure on the north side of the site (Figure 2) using 2-inch diameter Schedule 40 PVC piping. Inline, the SVE system consists of a 55-gallon moisture knockout vessel for moisture separation and to prevent water collection within the treatment media, three 300-pound (lb) carbon canisters, then a Fuji, 5-horsepower, regenerative vacuum blower capable of drawing a maximum 110 standard cubic feet per minute (scfm) of vapor, and finally two 1,500-pound carbon vessels to adsorb hydrocarbon vapor from the subsurface (Figure 2). The SVE unit is operated in accordance with San Joaquin Unified Air Pollution Control District (APCD) permit 5984-1. The permit was canceled in July 2005.

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### 2.2. SOIL-VAPOR EXTRACTION

The SVE unit was observed or maintained weekly and monitored monthly. During each monitoring event, the flow rate of extracted soil-vapor (influent) was measured using a totalizing-flow Blue White roto-meter. Vacuum potential was measured at the 2-inch influent line by the magnehelic vacuum gauge. In addition, the organic vapor concentrations in the influent stream (before entering the blower) and the effluent stream (after exiting the carbon unit) were measured using the organic vapor meter equipped with a photo-ionization detector (PID: Thermo Environmental 580b; 10.0 eV; calibrated to isobutylene). A Magnehelic vacuum gauge was temporarily attached to the inlet of the blower to measure vacuum pressure exerted on the extraction well, and a cumulative flow meter was utilized downstream of the carbon canisters to monitor air flow. Sampling ports were installed upstream of the knockout vessel and downstream of the 1,500-lb carbon vessels to recover influent and effluent SVE air flow samples used to monitor the efficiency of hydrocarbon removal; in addition, the influent and effluent streams were monitored routinely for the presence of organic vapor using a PID. Field measurements, recorded at regular intervals are summarized in Table 1. The SVE was operated between March and July 2005, at which time the operation of the system was terminated, due to lack of influent contamination.

Influent and effluent soil-vapor samples were collected on 13 April, 04 and 17 May, 08 June and 18 July 2005; the influent vapor samples were collected from within a vacuum chamber directly into Tedlar vapor bags; the effluent samples were collected directly out of the effluent stream. The samples were labeled, placed in a cooler and transported under chain of custody to Cal Tech Environmental Laboratories (CTEL) in Paramount, a State of California Department of Health Services (DHS)-certified analytical laboratories. The soil-vapor samples were analyzed for:

- Total petroleum hydrocarbons quantified as gasoline (TPH-g) in accordance with EPA Method 8015 Modified and
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) in accordance with EPA Method 8260b.

### 2.3. MONITORING WELL EVACUATION AND MONITORING

On 12 April and 11 July 2005, the water level in each of three monitoring wells was measured relative to the top of the well casing using a Solinst water level meter. After water levels were measured, a dedicated, disposable plastic bailer was used to purge each well. Four and one-half to five gallons (a minimum of three well volumes) of water were removed from the wells. Temperature, pH and conductivity of the purged water were measured at two-and-one-half gallon intervals in May and one-and-one-half gallon interval in July using an Oakton water analyzer during purging. The

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values had generally stabilized by the end of the purging process (Appendix B). Purged water was stored on-site in 55-gallon, department of transportation (DOT)-approved drums.

### 2.4. COLLECTION AND ANALYSIS OF GROUND WATER SAMPLES

Prior to collection of ground water samples, the depth to ground water was re-measured in each purged well to ensure that a minimum of 80% of the well volume had recharged. Then a water sample was collected from each well using the dedicated disposable plastic bailer. Each water sample was transferred into three chilled 40-milliliter (ml) volatile organic analysis (VOA) vials containing 0.5 ml hydrochloric acid (18%) as a sample preservative and one 1-liter amber bottle. After collection, the samples were labeled and placed in a chilled container for transportation under chain of custody to CTEL, a California DHS-certified analytical laboratory, in Paramount, California. Each sample was analyzed for:

- TPH-g and diesel (TPH-d) by EPA Method 8015M;
- BTEX and the oxygenated fuel additives MTBE, tertiary butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE) and tertiary amyl methyl ether (TAME), ethyl-dibromide (EDB) and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260 Modified.

### 3.0. FINDINGS

From field data collected at the SVE remediation unit between March and July 2005, AGE determined the average TPH-g concentration and the average air flow rate, and calculated the approximate mass and volume of hydrocarbons removed. Ground water elevation and flow direction were determined from the field data collected in April and July 2005; hydrocarbon-impact to ground water was inferred from laboratory analysis of the samples.

### 3.1. SOIL-VAPOR EXTRACTION

During the second and third quarters 2005, the SVE unit operated at an average air flow rate of 64 to 85 scfm, generating an induced vacuum (negative pressure) of approximately 15 up to 44 inches of water, measured in the piping between the blower and extraction well. The SVE unit operation was continuous over the two quarter, until 29 July when the system was disengaged due to the lack of hydrocarbons in the influent vapors.

13 April: TPH-g and BTEX compounds were not detected from the influent SVE sample nor the

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effluent SVE sample.

04 May: TPH-g and BTEX compounds were not detected from the influent SVE sample, MTBE was detected a concentration of 5.1 micrograms per liter ( $\mu g/l$ ). TPH-g and BTEX compounds were not detected from the effluent SVE sample.

17 May: TPH-g was detected from the influent SVE sample at a concentration of 120  $\mu$ g/l; BTEX compounds were detected at 4  $\mu$ g/l ethylbenzene and 7.3  $\mu$ g/l xylene; MTBE was detected at a concentration of 11  $\mu$ g/l. TPH-g and BTEX compounds were not detected in the effluent SVE sample.

08 June and 18 July: Contaminants of concern (COCs) were not detected in the influent SVE samples. COCs were not detected in the effluent SVE samples.

The analytical results are summarized in Table 2. The laboratory reports (CTEL Project Nos. CT214-0504131, 0505044, 0505162, 0506081 and 0507105) quality assurance/quality control (QA/QC) reports and chain of custody forms are included in Appendix C.

Extracted organic vapor concentrations measured with the PID were measured at a range of 34 to 101 ppm-volume (April).

### 3.2. MASS OF RECOVERED HYDROCARBONS

The hydrocarbon mass (TPH-g) removed during the operating period was calculated using the following equation:  $M = C \cdot Q \cdot t$ 

where: M = cumulative mass recovered (kg)

C = soil-vapor concentration (kg/m<sup>3</sup>)

 $Q = \text{extraction flow rate } (m^3/\text{hr})$ 

t =operational period, in hours

The estimated mass of hydrocarbons removed was calculated for the period between May and June 2005. The mass was based on laboratory analysis of soil-vapor samples, the flow rate and operational time. The mass of extracted hydrocarbons was calculated for the time period using average hydrocarbon concentrations of influent soil-vapor sample data, average air flow rates and duration of operation. The volume and mass calculations are shown below: using:

•  $C_{vanor} = 60 \mu g/l \text{ micrograms per liter, converted to } 0.00006 \text{ kg/m}^3$ 

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- $Q = 65 \text{ scfm (average)} \times 1.69 = 109.85 \text{ m}^3/\text{hr}$
- t = 768 hours (sum of known operation)
- $0.00006 \text{ kg/m}^3 \cdot 109.85 \text{ m}^3/\text{hr} \cdot 768 \text{ hours} = 5.06 \text{ kg gasoline}$
- 5.06 kg gasoline 2.205 lbs/kg = 11.16 lbs gasoline
- to convert lbs gasoline to gallons gasoline, use 0.16 gal/lb:
- $11.6 \text{ lbs} \cdot 0.16 \text{ gal/lb} = 1.785 \text{ gallons of gasoline}$

The operational results are summarized in Table 1. A total of 1,149.41 pounds, or 183.875 gallons of hydrocarbons have been extracted by the SVE system since 05 October 2004.

#### 3.3. GROUND WATER GRADIENT AND FLOW DIRECTION

Depth to ground water at the site on April 2005 ranged from 87.14 feet to 87.44 feet below the monitoring well casing tops. Depth to ground water at the site on July 2005 ranged from 90.74 feet to 91.07 feet below the monitoring well casing tops.

The ground water elevation in each well was calculated from this data. The ground water elevations during April ranged between 41.88 feet (MW-1) and 41.91 feet (MW-2) below mean sea level (MSL). The ground water elevations during July ranged between 45.51 feet (MW-1) and 45.58 feet (MW-2) below mean sea level (MSL). At the time of the April 2005 monitoring event, the ground water flow direction was inferred to be southwest at a gradient of approximately 0.00075 ft/ft. At the time of the July 2005 monitoring event, the ground water flow direction was inferred to be south to southeast at a gradient of approximately 0.0017 ft/ft. Figure 3 illustrates the contoured ground water elevations.

### 3.4. ANALYTICAL RESULTS OF WATER SAMPLES

COCs were not detected in any of the collected April or the July 2005 ground water samples. Analytical results from the ground water samples are summarized in Tables 4 and 5. The laboratory reports (CTEL Project No. CT214-0504117 and 0507049), QA/QC reports and chain of custody form are included in Appendix E. GeoTracker confirmation pages of submitted laboratory electronic deliverable format (EDF) files are included in Appendix F.

#### 4.0. SUMMARY AND CONCLUSIONS

Based on the data collected from the site, AGE concludes:

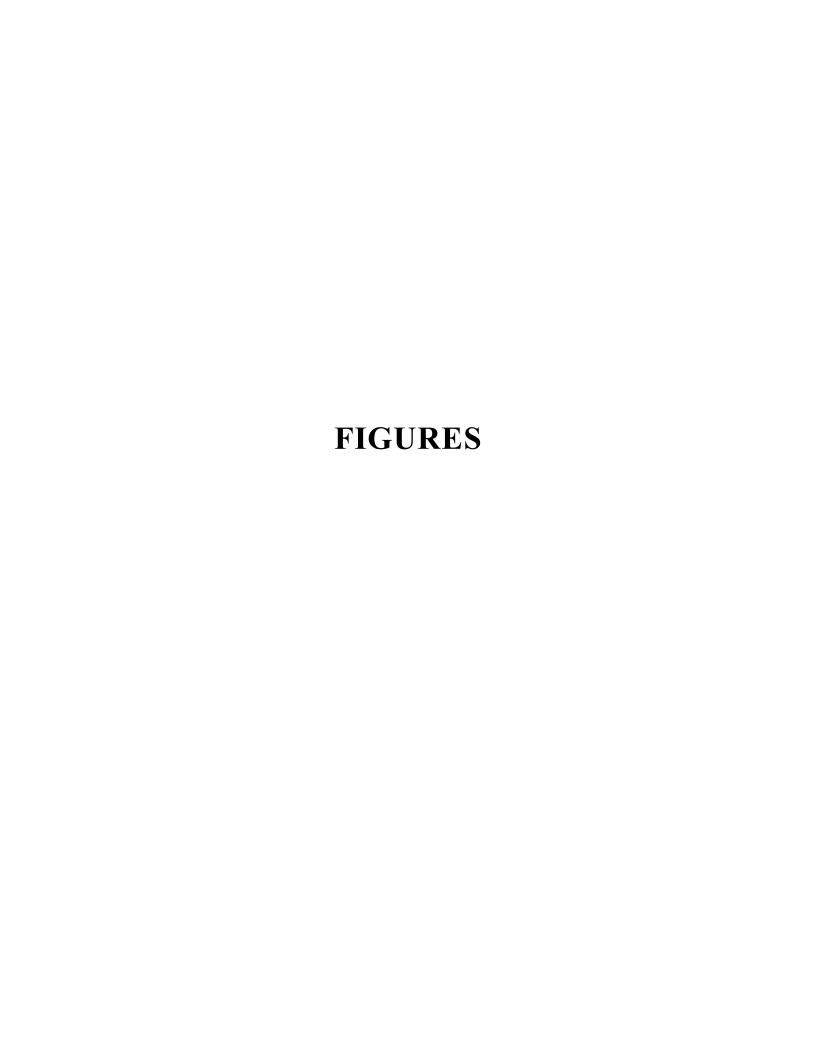
- Approximately 30.1 kg (66.4 pounds), or 10.62 gallons of hydrocarbons were extracted by the SVE system between March and June 2005. The volume and mass calculations are attached in Appendix D.
- A total of 1,204 lbs, or 192 gallons of hydrocarbons were extracted by the SVE system since 05 October 2004. Soil-vapor extraction samples demonstrated a decline in concentrations below detection limits and were not adequate for continued remediation.
- The ground water flow direction in April was inferred to be southwest at a gradient of approximately 0.00075 ft/ft and in July was inferred to be south at a gradient of approximately 0.0017 ft/ft.
- COCs were not detected in ground water monitoring well samples.
- COCs were not detected in the effluent SVE samples.

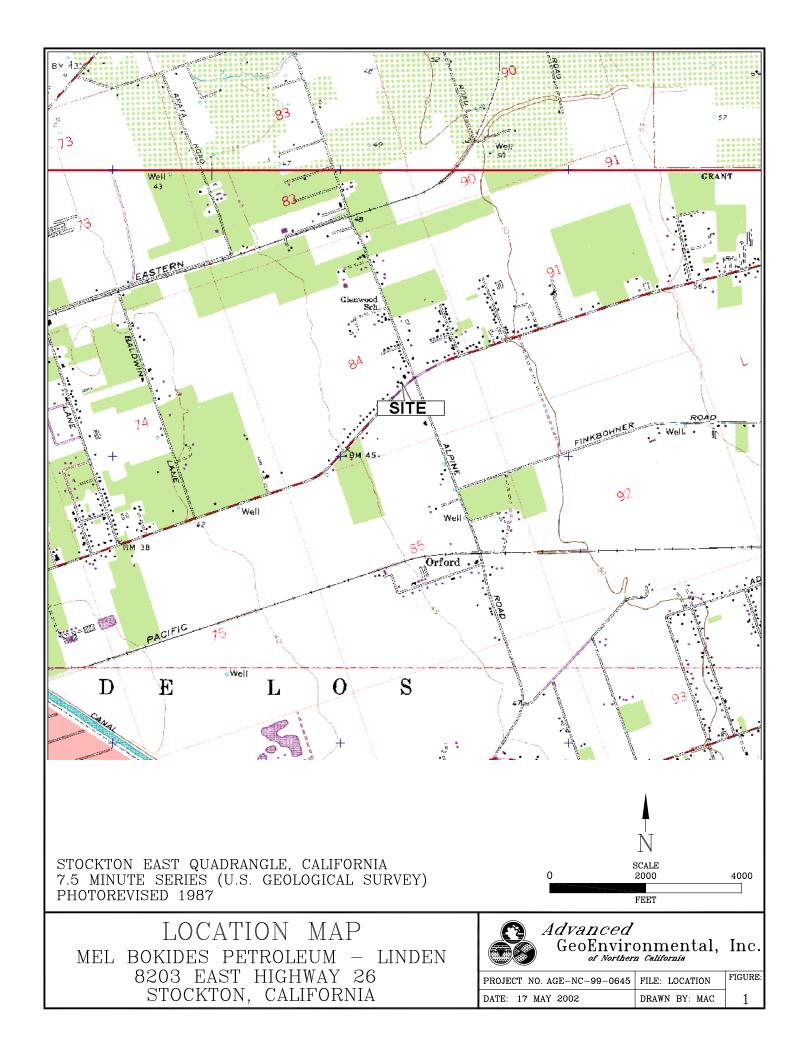
### 5.0. RECOMMENDATIONS

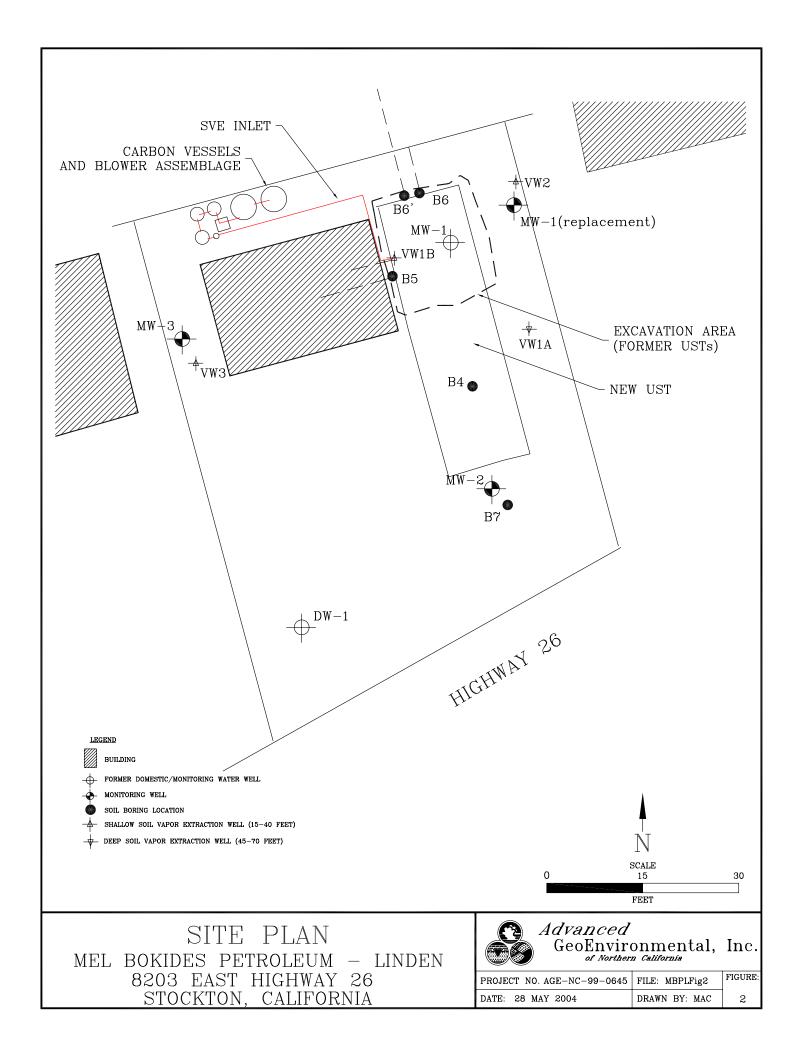
Based on the findings of this investigation, AGE recommends discontinuation of the soil-vapor extraction and preparation of a closure summary report.

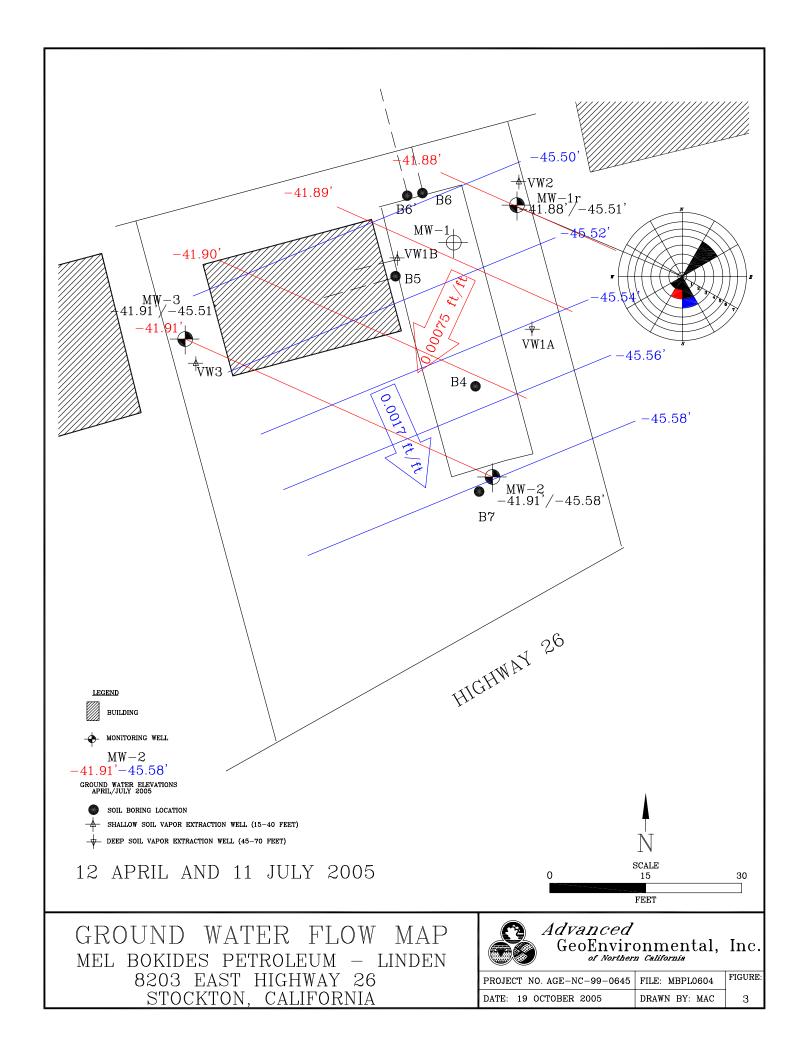
### 6.0. LIMITATIONS

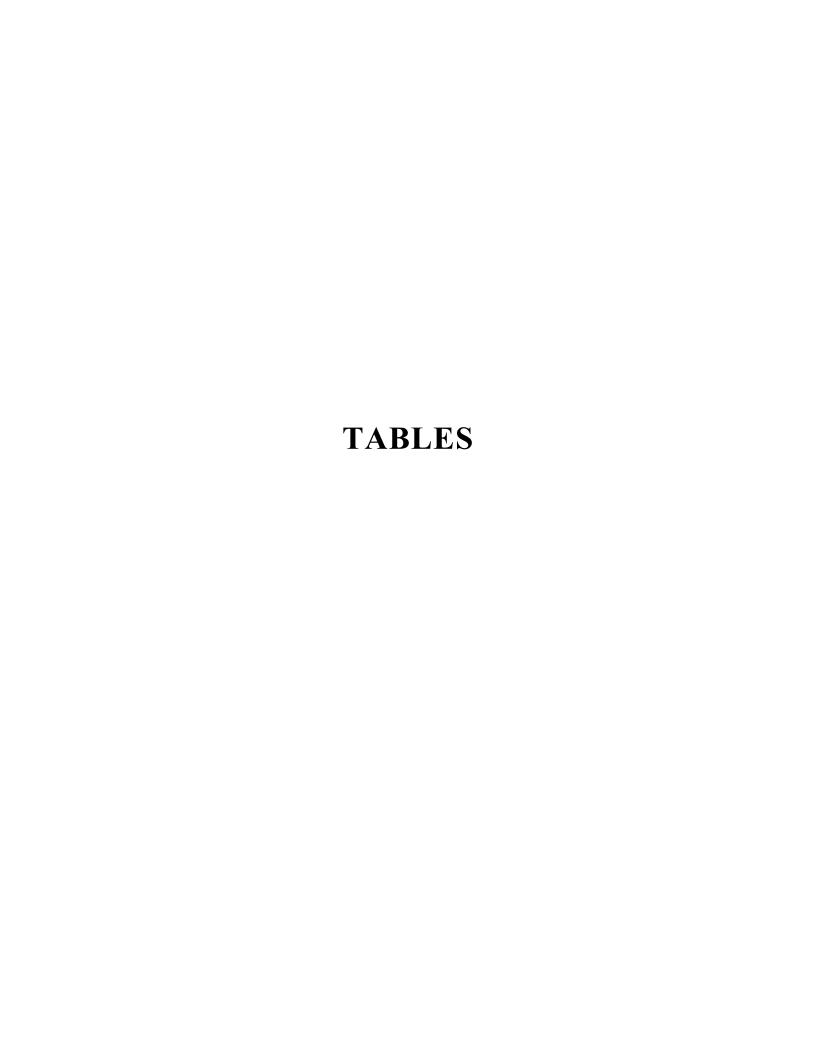
Our professional services were performed using that degree of care and skill ordinarily exercised by environmental consultants practicing in this or similar localities. The findings were based upon analytical results provided by an independent laboratory. Evaluation of the hydrogeologic conditions at the site for the purpose of this investigation was made from a limited number of available data points (e.g., soil-vapor, ground water samples) and subsurface conditions may vary away from these data points. No other warranty, expressed or implied, is made as to the professional interpretations, opinions and recommendations contained in this report.











### SOIL VAPOR EXTRACTION DATA Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

Date	Time	Hours	Flow (cfm)	Vacuum (inches of water)	Inlet (ppmv)	Outlet (ppmv)
10-05-04	1:30 pm	0	55	25	2020	0
10-13-04	12:30 pm	144	55	21	847	15
10-21-04	7:30 am	332	65	23	538	3.8
11-03-04	3:00 pm	647	50	18	1	13
11-17-04	1:00 pm	983	54	18	274	3
12-22-04	11:30 am	1823	70	26	838	4.1
01-21-05	12:00 pm	2543	65	32	135	11
02-16-05	3:30 pm	3167	65	29	247	88
03-08-05	7:30 am	3647	64	30	224	27
03-17-05	2:30 pm off	3863	63	23	66	74
03-23-05	3:00 pm on	3863	45	30	1	-
04-13-05	10:30 am	4367	85	44	101	0
05-04-05	1:30 pm	4871	68	15	34	1.4
05-17-05	11:30 am	5111	64	-	43	0
06-08-05	1:30 pm	5639	58		0	0
07-18-05	1:30 pm	6575	-	-	-	-

Notes:

cfm: cubic feet per minute ppmv: parts per million vapor

### ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

Sample I.D.	TPH as Gasoline	МТВЕ	Benzene	Toluene	Ethyl- benzene	Xylenes
Influent Pre-Carbon adsorption 10-05-04	12,000	160	15	450	40	300
Effluent Post-Carbon adsorption 10-05-04	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 10-13-04	3,900	130	11	260	27	180
Effluent Post-Carbon adsorption 10-13-04	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 10-21-04	1,300	340	8.0	87	28	220
Effluent Post-Carbon adsorption 10-21-04	110	<0.5	<0.5	2.9	5.0	40
Influent Pre-Carbon adsorption 11-03-04	2,000	77	<1.0	26	32	300
Effluent Post-Carbon adsorption 11-03-04	<25	22	<0.25	<0.25	<0.25	<0.25
Influent Pre-Carbon adsorption 11-17-04	500	76	<0.5	7.3	9.7	92
Effluent Post-Carbon adsorption 11-17-04	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 12-22-04	650	12	<0.5	1.7	2.6	25
Effluent Post-Carbon adsorption 12-22-04	120	<0.5	<0.5	<0.5	<0.5	4.0

### ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

Sample I.D.	TPH as Gasoline	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
Influent Pre-Carbon adsorption 01-21-05	450	35	<0.5	2.0	3.8	41
Effluent Post-Carbon adsorption 01-21-05	<50	<0.5	<0.5	1.4	<0.5	5.0
Influent Pre-Carbon adsorption 02-16-05	820	180	11	23	<0.5	<1.0
Effluent Post-Carbon adsorption 02-16-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 03-08-05	650	7.6	<0.5	36	2.2	12
Effluent Post-Carbon adsorption 03-08-05	110	<0.5	<0.5	7.5	<0.5	5.2
Effluent Post-Carbon adsorption 03-23-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 04-13-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Effluent Post-Carbon adsorption 04-13-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 05-04-05	<50	5.1	<0.5	<0.5	<0.5	<1.0
Effluent Post-Carbon adsorption 05-04-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 05-17-05	120	11	<0.5	<0.5	4.0	7.3
Effluent Post-Carbon adsorption 05-17-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0

### ANALYTICAL RESULTS OF SOIL-VAPOR SAMPLES Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

Sample I.D.	TPH as Gasoline	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
Influent Pre-Carbon adsorption 06-08-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Effluent Post-Carbon adsorption 06-08-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Influent Pre-Carbon adsorption 07-18-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0
Effluent Post-Carbon adsorption 07-18-05	<50	<0.5	<0.5	<0.5	<0.5	<1.0

Notes: TPH: Total petroleum hydrocarbons Methyl-tertiary-Butyl Ether MTBE:

TABLE 3
GROUND WATER ELEVATION DATA
Former MEL BOKIDES PETROLEUM - Linden
8203 East Highway 26, Stockton, California
(feet)

Well No. (well screen)	Casing Elevation	Sample Date	Depth to Ground Water	Ground Water Elevation
MW-1 (80' to 100') Destroyed	45.28	11/02/01 04/12/02 07/12/02	90.88 81.62 91.03	-45.60 -36.34 -45.75
MW-1r (80' to 100')	45.56	10/06/03 03/11/04 06/30/04 10/20/04 01/25/05 04/12/05 07/11/05	95.34 86.09 94.00 97.67 91.64 87.44 91.07	-49.78 -40.53 -48.44 -52.11 -46.08 -41.88 -45.51
MW-2 (80' to 100')	45.29 45.30	11/02/01 04/12/02 07/12/02 04/01/03 10/06/03 03/11/04 06/30/04 10/20/04 01/25/05 04/12/05 07/11/05	90.86 81.61 91.03 84.93 95.19 85.84 93.84 97.45 91.44 87.21 90.88	-45.57 -36.32 -45.72 -39.64 -49.90 -40.55 -48.54 -52.15 -46.14 -41.91 -45.58
MW-3 (80' to 100')	45.23 45.23	11/02/01 04/12/02 07/12/02 04/01/03 10/06/03 03/11/04 06/30/04 10/20/04 10/29/04 01/25/05 04/12/05 07/11/05	90.74 81.49 90.90 86.72 95.09 85.78 93.80 97.37 96.77 91.29 87.14 90.74	-45.51 -36.26 -45.67 -41.49 -49.86 -40.55 -48.57 -52.14 -51.54 -46.06 -41.91 -45.51
Domestic Well Destroyed	45.73	11/02/01	91.00	-45.27

TABLE 4
ANALYTICAL RESULTS OF GROUND WATER SAMPLES - EPA METHODS 8015M/8020
Former MEL BOKIDES PETROLEUM - Linden
8203 East Highway 26, Stockton, California
(µg/l)

Well	Commis	Depth to	8015	5M		Volatile a	romatic compou	nds (8020)	
I. D. (Screen)	Sample Date	GW (feet)	TPH-d	ТРН-д	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
MW-1 (80' to 100')	11/02/01 04/12/02 07/12/02 Destroyed	90.88 81.62 91.03	<50 <50 <b>55</b>	<50 <b>120</b> <50	<b>5.9</b> <1.0 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <1.0 <0.5
MW-1r (80' to 100')	10/06/03 03/11/04 06/30/04 10/20/04 01/25/05 04/12/05 07/11/05	95.34 86.09 94.00 97.67 91.64 87.44 91.07	<50 <50 <50 <50 <50 <50 <50	<50 <50 <50 <50 <50 <50 <50	- - - - -	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.6 <0.6 <0.6 <0.6 <0.6 <0.6
MW-2 (80' to 100')	11/02/01 04/12/02 07/12/02 04/01/03 10/06/03 03/11/04 06/30/04 10/20/04 01/25/05 04/12/05 07/11/05	90.86 81.61 91.03 84.93 95.19 85.84 93.84 97.45 91.44 87.21 90.88	<50 <50 <50 <50 <50 <50 <50 <50 <50 <50	<50 130 <50 <50 <50 <50 <50 <50 <50 <50 <50 <5	<5.0 <1.0 <0.5 <1.0 - - - -	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1.0 <0.5 <1.0 <0.5 <1.0 <0.6 <0.6 <0.6 <0.6 <0.6 <0.6 <0.6

TABLE 4

# ANALYTICAL RESULTS OF GROUND WATER SAMPLES - EPA METHODS 8015M/8020 Former MEL BOKIDES PETROLEUM - Linden

8203 East Highway 26, Stockton, California (µg/l)

The correction   Date   Correction   The correction   T	Well	Sample Date	= ' ' '	8015M		Volatile aromatic compounds (8020)					
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				TPH-d	ТРН-д	MTBE	Benzene	Toluene		Xylenes	
		04/12/02 07/12/02 04/01/03 10/06/03 03/11/04 06/30/04 10/20/04 10/29/04	81.49 91.03 86.72 95.09 85.78 93.80 97.37 96.77	<50 <50 <50 <50 <50 <50 <50 <50	<50 <50 <50 <50 <50 <50 <b>600</b> <50	<1.0 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 5.3 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 17 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 9.7 <0.5	<1.0 <0.5 <1.0 <0.5 <0.6 <0.6 <b>67</b> <0.6	

Notes:

μg/l: micrograms per liter

TPH-g/-d: Total petroleum hydrocarbons as gasoline/diesel

MTBE: Methyl-tertiary-Butyl Ether

TABLE 5
ANALYTICAL RESULTS OF GROUND WATER SAMPLES - EPA METHOD 8260B
Former MEL BOKIDES PETROLEUM - Linden
8203 East Highway 26, Stockton, California
(µg/l)

Sample ID	DIPE	ETBE	MTBE	TAME	TBA	Methanol	Ethanol	EDB	1,2-DCA
MW1/11-02-01	<1.0	<1.0	4.7	<1.0	< 5.0	< 500	<50	<1.0	<1.0
MW1/04-12-02	<1.0	<1.0	<1.0	<1.0	<25			< 0.5	< 0.5
MW1/07-12-02	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 500	< 50	< 0.5	< 0.5
Destroyed	=	-	=	=	-	=	-	=	-
MW1r/10-06-03	< 5.0	< 5.0	120	< 5.0	<50	-	-	< 5.0	< 5.0
MW1r/03-11-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW1r/06-30-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW1r/10-20-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW1r/01-25-05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW1r/04/12/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW1r/07/11/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/11-02-01	<1.0	<1.0	<1.0	<1.0	< 5.0	< 500	<50	<1.0	<1.0
MW2/04-12-02	<1.0	<1.0	<1.0	<1.0	<25			< 0.5	< 0.5
MW2/07-12-02	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 500	< 50	< 0.5	< 0.5
MW2/04-01-03	<1.0	<1.0	<1.0	<1.0	<10	<1,000	< 50	< 0.5	< 0.5
MW2/10-06-03	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	-	-	< 0.5	< 0.5
MW2/03-11-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/06-30-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/10-20-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/01-25-05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/04/12/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW2/07/11/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5

**TABLE 5**ANALYTICAL RESULTS OF GROUND WATER SAMPLES - EPA METHOD 8260B

# Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

 $(\mu g/l)$ 

Sample ID	DIPE	ETBE	MTBE	TAME	TBA	Methanol	Ethanol	EDB	1,2-DCA
MW3/11-02-01	<1.0	<1.0	<1.0	<1.0	<5.0	<500	<50	<1.0	<1.0
MW3/04-12-02	<1.0	<1.0	<1.0	<1.0	<25			< 0.5	< 0.5
MW3/07-12-02	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 500	< 50	< 0.5	< 0.5
MW3/04-01-03	<1.0	<1.0	<1.0	<1.0	<10	<1,000	< 50	< 0.5	< 0.5
MW3/10-06-03	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	-	-	< 0.5	< 0.5
MW3/03-11-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/06-30-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/10-20-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/10-29-04	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/01-25-05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/04/12/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5
MW3/07/11/05	<1.0	<1.0	<1.0	<1.0	<10	-	-	< 0.5	< 0.5

Notes:

 µg/l:
 micrograms per liter

 DIPE:
 Di-isopropyl Ether

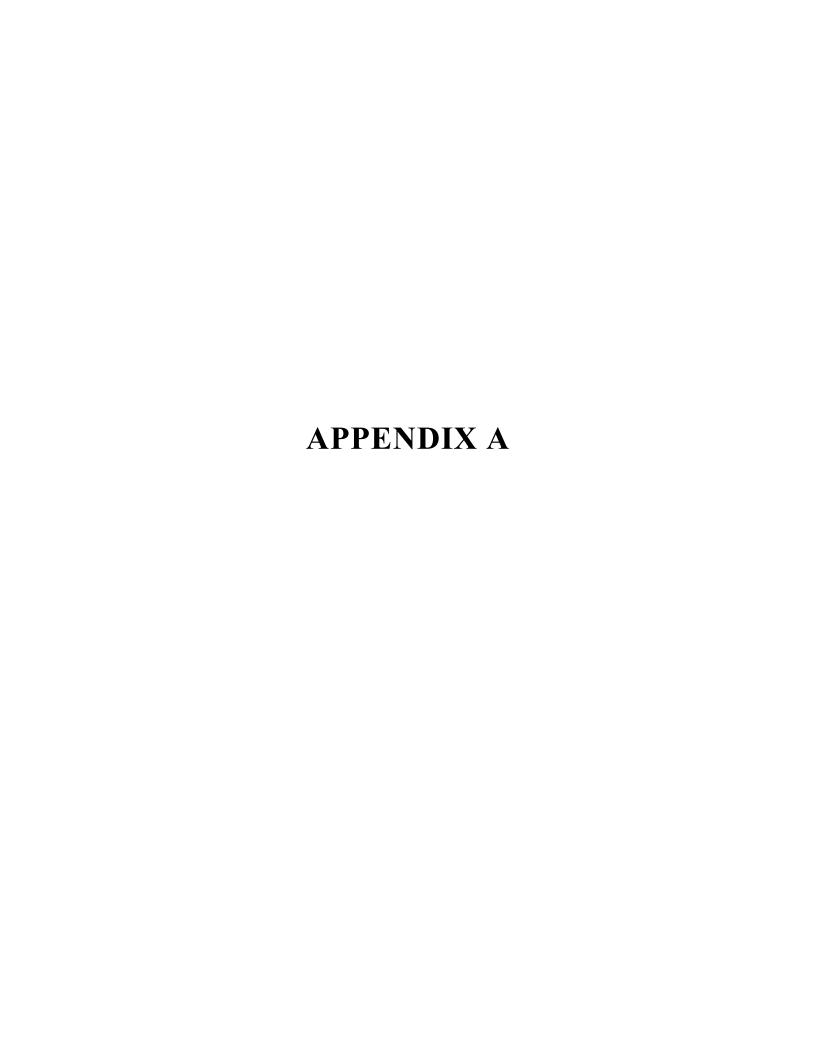
 ETBE:
 Ethyl tertiary-Butyl Ether

 MTBE:
 Methyl-tertiary-Butyl Ether

 TAME:
 tertiary-Amyl Methyl Ether

TBA: tertiary Butyl Alcohol or tertiary Butanol EDB: Ethylene Dibromide or 1,2-Dibromoethane

1,2-DCA: 1,2-Dichloroethane



### Site Background Information Former MEL BOKIDES PETROLEUM - Linden 8203 East Highway 26, Stockton, California

The site was formerly a gasoline station and mini-mart. On 07 May 1999, three USTs, associated piping and a dispenser island were removed from the site by Semco of Modesto. Six soil samples were collected beneath the USTs, two soil samples were collected beneath the dispenser area and four laboratory composited soil samples were collected from the excavated soil.

Approximately 150 cubic yards of soil were excavated during removal of the USTs; subsequent to the soil sampling activities, the soil was placed back into the excavation.

Laboratory analysis of the soil samples detected total petroleum hydrocarbons quantified as gasoline (TPH-g) at concentrations up to 17,000 milligrams per kilogram (mg/kg) beneath the northern UST (Tank#1); benzene, toluene, ethylbenzene and xylenes (BTEX) were detected at concentrations as high as 3,000,000 micrograms per kilogram ( $\mu$ g/kg).

Methyl tertiary butyl ether (MTBE) and/or tertiary butanol (TBA) were detected in soil samples collected from the former UST excavation and stockpiled soil at the site at concentrations as high as 160,000 µg/kg MTBE. The presence of high concentrations of MTBE in the soil samples indicated that an unassessed mass of MTBE remained at the site.

#### INTERIM SOIL REMEDIATION

On 21 March 2000, AGE personnel excavated 195 metric tons of impacted soil from the former tank pit utilizing an excavator outfitted with a 2.45 cubic-yard bucket. Following the removal of the original soil backfill material, the excavation was enlarged and deepened to an approximate depth of 22 feet bsg, and soil samples were collected from the floor (F-1) and walls (WW, EW, NW and SW) of the excavation, as well as the soil stockpiles, for laboratory analysis. On 22 March 2000, the impacted soil was transported from the site and disposed of at Forward Landfill.

TPH-g was detected in excavation soil samples F-1, WW, EW and NW at 6.0 mg/kg, 23,000 mg/kg, 29 mg/kg and 32 mg/kg, respectively; TPH-g was not detected in sample SW.

BTEX compounds were detected in all excavation samples except SW, at maximum concentrations of 56 mg/kg benzene, 1,700 mg/kg toluene, 470 mg/kg ethylbenzene and 2,900 mg/kg xylenes in sample WW.

MTBE was detected in all excavation samples at concentrations ranging from 28  $\mu$ g/kg (SW) to 140,000  $\mu$ g/kg (WW). TAME was detected only in sample WW at 9,200  $\mu$ g/kg; TBA was detected in samples F-1 and NW at 6,100  $\mu$ g/kg and 100  $\mu$ g/kg, respectively.

Site Background Information: Mel Bokides Petroleum - Linden Page 2 of 5

The composited stockpile soil samples contained TPH-g at concentrations ranging from 1,900 mg/kg to 2,100 mg/kg. BTEX compounds ranged from below laboratory detection limits (benzene in sample SPA-D) to 280 mg/kg (xylenes in sample SPH-L). MTBE, TAME and TBA were detected as high as 3,000  $\mu$ g/kg, 240  $\mu$ g/kg and 3,500  $\mu$ g/kg, respectively.

AGE calculated that approximately 126 gallons of gasoline were removed in the soil excavated during the interim remediation. The highest concentrations of petroleum hydrocarbon compounds left in place were detected in the sample collected from the western wall of the former excavation. Lower concentrations of petroleum hydrocarbons as gasoline were also detected in the floor sample and samples collected from the north and west sidewalls. Fuel oxygenates, including MTBE, TAME and TBA were detected in all samples.

#### SITE ASSESSMENT

On 15 through 17 October 2001, six soil borings (B1 through B6) were advanced at the site; three soil borings, B1 through B3, were established as ground water monitoring wells MW-1 through MW-3, respectively.

Soil in the area of boring B1 (MW-1) and borings B4 and B5 were found to contain high concentrations of petroleum hydrocarbons at depths of 15 bsg, with reduced concentrations encountered at depths to 70 feet bsg.

Ground water monitoring data from the initial ground water monitoring event on 02 November 2001 indicated that ground water was flowing towards the northeast, and was locally impacted by the oxygenated fuel additive MTBE.

On 27 September 2002, monitoring well MW-1 was destroyed by drilling out the entire boring length and backfilling with neat cement and bentonite in the upper 15 feet of the excavation. Additionally, the domestic on-site well was destroyed by percussion explosion and backfilled with a sand and cement mix.

#### ADDITIONAL SITE ASSESSMENT AND REMEDIATION FEASIBILITY

On 09 through 11 September 2003, a total of seven soil borings were advanced at the site: boring B6' was advanced north of the excavation area at a 20 degree angle, to an extent of 80 feet; B7 was advanced southeast of well MW-2 to 70 feet bsg; boring MW-1R was installed east of the former UST area to 100 feet bsg; vapor well VW1B was advanced under the building at a 20 degree angle to an extent of 40 feet, VW1A was installed east of the former UST area to 70 feet bsg; VW2 was installed east of the former UST area to 40 feet bsg and VW3 was installed south of well MW-3 to

Site Background Information: Mel Bokides Petroleum - Linden Page 3 of 5

60 feet bsg. Soil samples were collected at five foot intervals, generally beginning at 10 feet bsg, or where native soil was encountered below back fill.

A total of 28 soil samples were analyzed. Samples from B6' had concentrations of BTEX compounds and MTBE above laboratory reporting limits. MTBE ranged from 0.010 milligrams per kilogram (mg/kg) to 0.63 mg/kg. Maximum concentrations of BTEX compounds were 0.020 mg/kg benzene, 0.060 mg/kg toluene, 0.030 mg/kg ethylbenzene and 0.070 mg/kg xylenes. The sample results from B7 showed only one contaminated sample, at 30 feet, with 0.49 mg/kg MTBE. Samples from MW-1R had 1.2 mg/kg TPH-g at 40 feet; MTBE was detected at concentrations of 0.43 mg/kg and 1.2 mg/kg at 30 and 40 feet, respectively; TAME was detected at 30 and 40 feet, at concentrations of 0.040 mg/kg and 0.030 mg/kg, respectively.

Results from VW1A showed TPH-g and TAME at 40 feet with concentrations of 4.6 mg/kg and 0.010mg/kg, respectively. MTBE was detected from 40 to 60 feet, ranging from 0.030 mg/kg to 4.2 mg/kg. Soil from VW3 had MTBE at 30 and 40 feet with concentrations of 0.020 mg/kg and 0.060 mg/kg, respectively.

Monitoring and vapor extraction wells were completed within the following intervals: MW-1R from 80 feet to 100 feet bsg; VW1B from 15 feet to 40 feet bsg; VW1A from 40 feet to 70 feet bsg; VW2 from 15 feet to 40 feet bsg; VW3 from 20 feet to 50 feet bsg.

MTBE was detected in the ground water sample collected from well MW-1 at a concentration of  $120 \mu g/l$ .

### **SVE REMEDIATION FEASIBILITY PROCEDURES**

Two separate soil vapor extraction pilot tests were conducted on 18 September 2003 and 06 October 2003. On 18 September 2003, the upper sand layer was tested using vapor well VW1B, screened from 15 feet bsg to 40 feet bsg, as the extraction well. On 06 October 2003, a second pilot test was conducted on the fine-grained deeper impacted areas closest to ground water at the site using vapor well VW1A, screened from 40 feet bsg to 70 feet bsg as the extraction well. The pilot tests were initiated at 8:00 am and continued for 8 hours. A total of four soil vapor samples were collected during each pilot test.

Analytical results of soil vapor samples were generally highest in the second sample collected on 18 September. Extraction well VW1B results indicated: TPH-g was detected in all the soil vapor samples at concentrations ranging from 11,000  $\mu$ g/l to 14,000  $\mu$ g/l; benzene, toluene, ethylbenzene and xylenes were detected in every sample at concentrations as high as 54  $\mu$ g/l benzene, 1,400  $\mu$ g/l toluene, 160  $\mu$ g/l ethylbenzene, 990  $\mu$ g/l xylenes; and MTBE was detected in all the samples ranging from 730  $\mu$ g/l to 860  $\mu$ g/l. Toluene and total xylenes were detected in one sample collected from

Site Background Information: Mel Bokides Petroleum - Linden Page 4 of 5

VW1A on 06 October at a concentration of  $0.39 \mu g/l$  and  $0.29 \mu g/l$ , respectively. No other analytes were detected at or above laboratory reporting limits in the soil vapor samples.

The shallow test results indicated the flow rate was initially measured at 42 cfm (standard cubic feet per minute) and the maximum observed was 75 cfm. OV readings ranged from 923 ppm to 1,100 ppm. Induced vacuum measured at the extraction well VW1B ranged from 20 to 32 inches of water. On 06 October 2003, the lower screened vapor extraction test results had measured flow rates between 25 cfm and 31 cfm; a much lower flow was observed. OV readings ranged from 1.2 ppm to 2.5 ppm, which was consistent across the pilot test. Induced vacuum measured at the extraction well (VW1A) was always greater than 100 inches of water.

During the shallow soil vapor extraction pilot test (18 September) the greatest induced vacuum was measured in the observation point nearest the extraction well, at 0.60 inches of water in wells VW2 and VW3. The lowest vacuum was measured in MW-3, approximately 30 feet west of the extraction point and screened much lower in the stratigraphy at the site; however, sufficient induced vacuum was observed in the monitoring wells to demonstrate that a vertical connection may exist across the vertically separated layers at the site.

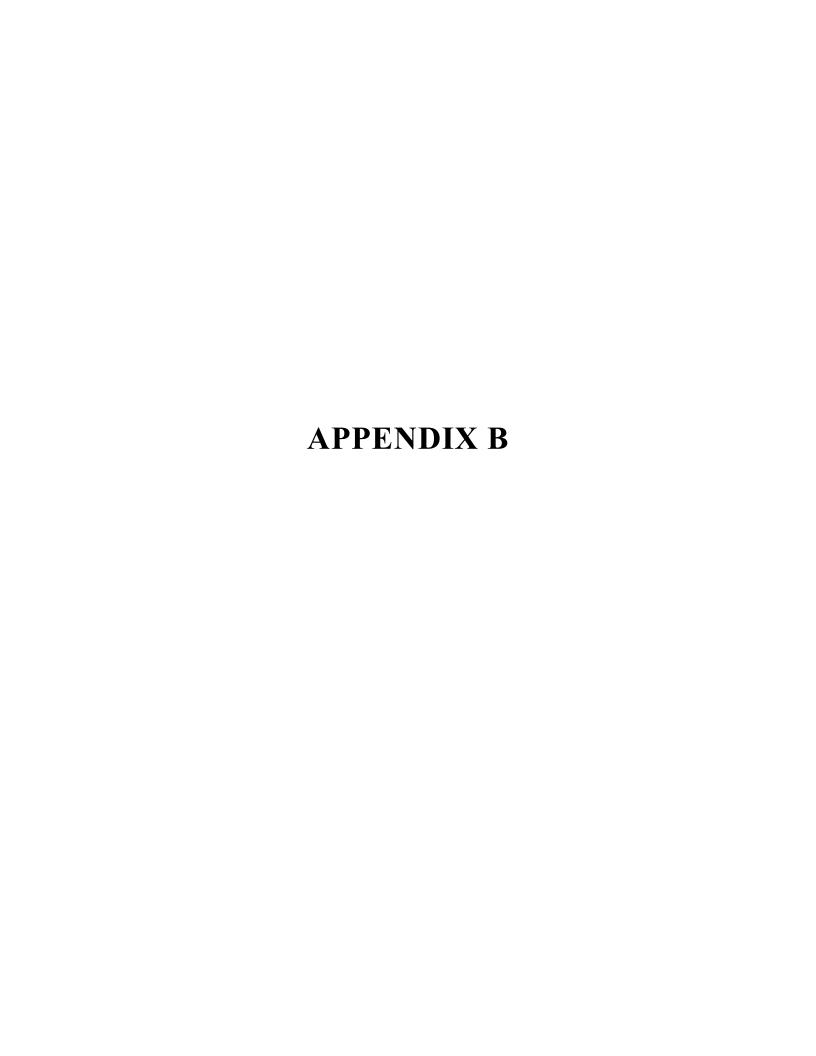
During the deeper soil vapor extraction pilot test (06 October) the greatest induced vacuum was measured in the observation point nearest the extraction well, at 0.45 inches of water in well MW-1R. The lowest vacuum was measured in VW2 and VW1B, approximately 20 feet west of the extraction point and screened above the lower stratigraphy at the site. Again, sufficient induced vacuum was observed in the monitoring wells and also in the upper soil vapor extraction wells, to demonstrate that a vertical connection may exist across the vertically separated layers at the site.

AGE plotted on a logarithmic scale the maximum vacuum measured at the observation points during the pilot test versus the distance from the extraction well. The effective radius of influence was determined by drawing a best-fit line though these data points to correlate distance to vacuum data. At a vacuum potential of 0.10 inches of water, the radius of influence is approximately 30 feet for the lower screened well (VW1A) and radius of influence is approximately 40 feet for the upper screened well (VW1B); at an induced vacuum potential of 1.0 inches of water, the radius of influence is 20 feet for well VW1A and approximately 25 feet for well VW1B. Further, a vacuum potential of 10.0 inches of water the radius of influence is less than 10 feet. Based upon an effective vacuum potential of 0.1 inches of water, the calculated effective radius of influence at the site will be 30 feet up to almost 40 feet for the upper screened vapor well. The majority of the residual impacted soil would be collected within the 40 foot radius of influence.

#### SITE CONCEPTUAL CONCLUSIONS

Based on the data collected from the site, AGE concludes:

- The sand units occurred at depths of 15 to 30 feet bsg and 75 or 80 feet to 80 or 85 feet bsg. The deepest sand unit previously encountered may actually be two thinner units. Ground water was encountered at approximately 96 feet bsg. Ground water flow direction at the site was northwest. The decrease of ground water elevation of approximately 4 feet between July 2002 and October 2003 may be due to seasonal fluctuation.
- TPH-g was detected in the soil boring sample collected north of the site (B6'). Low concentrations of MTBE were detected in the soil sample to a depth of 55 feet bsg in the same boring. Benzene concentrations were detected in the two deepest soil samples collected from the northern boring, indicating the northern migration of only benzene, at a depth of 60 feet to 70 feet bsg or the presence of another source off the northern edge of the site. With no detections of benzene in the upper 55 feet of boring B6'/6, only low detections of benzene in the former UST soil boring B1, all less than 0.1 mg/kg, and the lack of detectable hydrocarbons in the soil boring MW-1R below 50 feet bsg; the source of the off-site benzene detected in the furthermost reach of boring B6' appears to be from another source than the UST release. However, soil vapor extraction on-site will likely effectively mitigate the detections off-site.
- TPH-g was not detected in the soil boring sample collected at the west edge of the site (VW3). Only low concentrations of MTBE were detected at 30 and 40 feet bsg in boring VW3. TPH-g was not detected in the soil boring sample collected at the southern edge of the site (B7). Only one detection of MTBE was in the soil, from 30 feet bsg in boring B7.
- TPH-g was only detected in the upper most soil sample from boring VW1A, at the east edge of the site. MTBE was detected in samples from boring B7 from 40 feet to 60 feet bsg. The lateral extent of adsorbed MTBE may extend below the eastern boundary of the site. Soil vapor extraction on-site will likely effectively mitigate the MTBE off-site.
- Generally, the highest concentrations of MTBE were detected within a 45 foot thick interval, occurring between 15 feet and 60 feet. The vertical extent of the MTBE-impacted soil was limited to less than 70 feet bsg.
- MTBE was detected in one ground water sample (MW-1) at a concentration of 120  $\mu$ g/l. This concentration exceeds the maximum contaminant level for MTBE in drinking water.
- Based upon effective vacuum potential of 0.1 inches of water, the calculated effective radius of influence at the site for vapor wells screened from 15 feet to 40 feet bsg will be approximately 40 feet. The calculated effective radius of influence at the site for vapor wells screened from 40 feet to 70 feet bsg or greater will be approximately 30 feet.
- TPH-g, TPH-d and BTEX compounds were not detected in the three water samples collected.





# Advanced GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95215

## FIELD ACTIVITY LOG .....

	PROJECT: MBP/Linden PROJECT TYPE:	DATE: 4/13/05
SITE ADDR	Edd	SONNEL: Rus
WORKDESO	CRIPTION/TITLE: Sampling /0 +m	
TIME	ACTIVITIES .	
1016	Mob to Site	
	ousete	
1039	Sample Influent PID reading = 101	pour
1034	Sample Etoluent PID reading = 0 pp	m
	Flow = 85 CFM Vacuum = 44.0 Eous	
1040	Emply K/O + restort	
1045	Leave site	
	return to stop , unload , 100	saperworks tefe "
1010 5	Thep samples to Cal Tack	
-		
-		
4		
6		
		BILLABLE HOURS:

Approved By:\_\_\_\_

Project Manager/Supervisor:

# Advanced GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95215

# FIELD ACTIVITY LOG

PROJECT: MBP/Linden PROJECT TYPE: Aux

PROJECT TYPE: Air Sampling

ugling DATE: 5/4/0

SITE ADDRESS:\_

FIELD PERSONNEL:

WORK DESCRIPTION/TITLI	Ξ:
------------------------	----

WORLDE	SCRIPTION/TITLE:
1250	Mob to sto
	installed Port at well head for influent
1321	Saughe Engluent -> PID = 34.0 ppm
1326	Sample AFT/BlowER PID = 10H ppm
1330	Sample Effluent PID = 0.0 ppm
	Total Flow 68.0 CFM (totalizer) Vacuum 15.0 Row
21	empty to of 10 gollons condensato
1340	Leave Site
1	Return to stop , unlook
	Coef Paperwork
1410	Ship Sangles to Cal Ric
pproved By:	BILLABLE HOURS:

Approved By:\_\_\_

Project Manager/Supervisor:\_

### Advanced GeoEnvironmental, Inc.

FIELD ACTIVITY LOG .....

837 Shaw Road, Stockton, CA 95215

	110	0	//	17
PROJECT	1415	PI	410	den

PROJECT TYPE: Sampling

DATE: 5/17/09

SITE ADDRESS:

\_ FIELD PERSONNEL:

WORK DESCRIPTION/TITLE:	W	ORK	DESC	CRIPT	ION/	TITL	E:
-------------------------	---	-----	------	-------	------	------	----

WORKDEDC	CRITION/III LE.	
1120 1120	Load Mob	
	onsite i System running Norm', no	water in
	Total Flow = 64 cfm 1410 = 43.0 ppm outlet PID = 0.0 ppm	
1150		
1155	Somple Enthuest	
1205	leave site	
1355	Coc/Paperwort	
1410	Elipped Somples se Ce	1 lee
		× 633
· ·		
	BILLAB	LE HOURS:

SITE ADDRESS:

# Advanced GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95215

### FIELD ACTIVITY LOG ....

PROJECT: MBP/Linden PROJECT TYPE: Aw Sange, DATE: 6/8/65
ss: FIELD PERSONNEL: RM

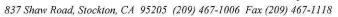
WORK DESCRIPTION/TITLE

WORK DESCRIPTION/TITLE: TIME BILLABLE HOURS:

Approved By:\_\_\_\_

Project Manager/Supervisor:

## GeoEnvironmental, Inc.





# Ground Water Depth & Dissolved Oxygen Field Log

Project: MBP- LINDEN	-	Date:_	$\neg /$	illa	25	=
Field Personnel:		Page:_	1	_ of _	1	78

Well	Time	Casing Elevation	Depth To	Ground Water	Actual Depth	Screened Depth	Dissol	ved Ox	ygen
I.D.	Time	Lievation	Water	Elevation	Deptii	Берш	mg/l	%	°C
MW-1	0817	45.28	91.07		9040	100			
MW-2	0821	45.29	90.98		99.35	100			
MW-3	0825	45.23	90.74		99.45	100			
DW-1		45.73							
			Š.						



## Advanced GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95215

## FIELD ACTIVITY LOG ....

	PROJECT: MBPLINEN PROJECT TYPE: QM	
TE ADDRE	SS:FIELD PERSONN	EL: CT
ORK DESCI	RIPTION/TITLE:	· · ·
BETTER THE THE THE		
0730	AEB9 Lond	-
0757	10/3-00 8rpe	
0901	onsite Setup Decen & Get D	Twis :
0817	Begin to Direje & Saupre Wellto Begin Durge & Wellto Osos - Os Muz Osos - Os	22 247
0455	Cleen O	
IIOJ	Morses Enp	
1030	Fonsies	
643		
		BILLABLE HOURS:
Approved By	: Project Manager/Supervisor:	

## Advanced GeoEnvironmental, Inc.

## FIELD ACTIVITY LOG ....

BILLABLE HOURS:

837 Shaw Road, Stockton, CA 95215

	PROJECT: POP-LIVIDAN	PROJECT TYPE : QM	DATE: 4/12/05
SITE ADDRE	SS:	FIELD PERSONNE	L. CT
WORK DESC	RIPTION/TITLE:		
T.W.F.		ACTIVITIES ACCESS AND	
0700	Prep & Load		
0139	LEBTO STE		
045	on site open w	ell's & Got DTW	2
<i>0</i> €30	Begin to purge of well to Begin hull begin to purge of the well to begin hull begin begin hull begin begin hull begin hull begin beg	E Sample Purge   Same OBSE   OII	1
1017	CLEENIP É ENPRE	J k.O. Drum	
1032	Masto Shap		
1038	AT Shop in load & (3)	ling	
1115	Finished		
	n n	,	
İ			
		OPZU Mingh	etim Site

Approved By:\_\_

Project Manager/Supervisor:\_

# GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118





## Monitoring Well Field Log

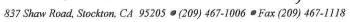
#### Well Data

Project Name: MBP-LINI	DEN	Project No.: <i>AGE-NC</i> -99-0645	Date: 4/12/05			
Pre-Purge DTW: 87.44  Post-Purge DTW: 86.02	Time: 0159	Well I.D.:	8			
Total Depth of Well:	Well Volume: 2.17	Casing Diameter: 0.5' Gal./Ft.: 0.0107				
Sampler(s):		Sample Containers:  1 Amber Liter & 3 VOAS				
Sample I.D.:	1041205	Analysis: TPH-g / TPH-d / BTEX /	oxys			

Time	Volume (gallons)	рН	Temp.	Cond µS/cm X <u>100</u>	Color/ Turbidity	Notes
0837	0	Ce-45	20.5	550	Olear	no oder
0842	2.5	6.52	20.Ce	526	acidey	u
0849	4.5	6.60	201	521	4	u
0853	6.5	6.63	20.8	517		
	-Wait F	for negu	later to	Sample		
					<u> </u>	

Purge Method:	DISPOSABLE BAILER			
Sample Method:	DISPOSABLE BAILER	Well Integrity:		
Sample Time:	0959	Dissolved O <sub>2</sub> :	C	
ICM	Oakton	. %	mg/L	06365
				Table 1

# GeoEnvironmental, Inc.





## Monitoring Well Field Log

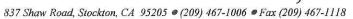
#### Well Data

Project Name: MBP-LINDE	EN	Project No.: AGE-NC-99-0645		Date:	05	
Pre-Purge DTW: 87.21 Post-Purge DTW: 87.68	Time: 0800 Time: OR ( Z	Well I.D.:				
Total Depth of Well:	Well Volume: 7.24	Casing Diameter: Gal./Ft.: 0	0.5" 0.01074	0.16	4" 0.65	6" 1.47
Sampler(s):	Sample Containers:  1 Amber Liter & 3 VOAS					
Sample I.D.: MU2 /	Analysis: TPH-g / TPH-d / BTF	EX / 0	XYS			

Time	Volume (gallons)	рН	Тетр.	Cond µS/cm X <u>100</u>	Color/ Turbidity	Notes
0857	0	6.89	20.4	466	Clear	no odor
0902	2.5	(0.500	70.6	160	Cloudy	<b>3.</b> (
0907	5 (	1.59	207	447	ч	4
0911	-1	6.55	20.7	458	u	iq
	- Wait	FOUR	eglate	v to s	aupre	
			о д			

Purge Method:	DISPOSABLE BAILER			
Sample Method:	DISPOSABLE BAILER	Well Integrity:		
Sample Time:	loll	Dissolved O <sub>2</sub> :	C	
ICM	Oakton	. %	mg/L	
	*			

## GeoEnvironmental, Inc.





## Monitoring Well Field Log

#### Well Data

Project Name:	Project No.: Date:
MBP-LINDEN	AGE-NC-99-0645 4/12/05
Pre-Purge DTW: 87-14 Time:0811	Well I.D.:
Post-Purge DTW: 87.14 Time: 0942	MW3
Total Depth of Well: Well Volume:	Casing Diameter: 0.5" 4" 6" Gal./Ft.: 0.01074 0.16 0.65 1.47
Sampler(s):	Sample Containers:  1 Amber Liter & 3 VOAS
Sample I.D.: MW 3 (041705	Analysis: TPH-g / TPH-d / BTEX / OXYS

Time	Volume (gallons)	рН	Temp.	Cond µS/cm X <u>100</u>	Color/ Turbidity	Notes
0925	0	6.64	20.0	371	alear	ne odor
031	2.5	Ce.lez	19.9	442	h.	И
836	4.5	6.69	19.9	443	h	L
0940	6.5					
	9					

Purge Method:	DISPOSABLE BAILER			
Sample Method:	DISPOSABLE BAILER	Well Integrity:		
Sample Time:	0946	Dissolved O <sub>2</sub> :	С	
ICM	Oakton	. %	mg/L	
		*		

# GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118





## Monitoring Well Field Log

Well Data

Project Name:  MBP-LINDEN	Project No.: Date:   Date:
Pre-Purge DTW: 91.07 Time: 0917  Post-Purge DTW: 91.42 Time: 095	Well I.D.:
Total Depth of Well: Well Volume:	Casing Diameter: 0.5" 2" 4" 6" Gal./Ft.: 0.01074 0.16 0.65 1.47
Sampler(s):	Sample Containers:  1 Amber Liter & 3 VOAS
Sample I.D.: MW- \ /071105	Analysis: TPH-g / TPH-d / BTEX / OXYS

	Stabilization Data					
Time	Volume (gallons)	рН	Temp.	Cond µS/cm X <u>100</u>	Color/ Turbidity	Notes
0839	0	6.43	264	(B)	Clever	mades
0843	1.5	650	2019	(037	andy	4
0947	3	6.55	20.8	045	40	u
0850	5	6.59	20.6	(072	h	c <sub>1</sub>

Purge Method:	DISP.	Bailer	
Sample Method:	Same	Well Integrity:	
Sample Time:	0854	Dissolved O2:	С
ICM	Oakton	%	mg/L
000000			

# GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118





## Monitoring Well Field Log

Well Data

Project Name: MBP-LINDEN	Project No.: Date: 7 11105
Pre-Purge DTW: 9088 Time 0821  Post-Purge DTW: 11.02 Time 0918	Well I.D.:  Well T.D.:
Total Depth of Well: Well Volume:	Casing Diameter: 0.5" 2" 4" 6" 6" Gal./Ft.: 0.01074 0.16 0.65 1.47
Sampler(s):	Sample Containers:  1 Amber Liter & 3 VOAS
Sample I.D.: MW - Z /071105	Analysis: TPH-g / TPH-d / BTEX / OXYS

r <del></del>			·	**			
Time	Volume (gallons)	рН	Temp.	Cond μS/cm X <u>100</u>	Color/ Turbidity		Notes
7905	0	C041	7(-0	(a03	New	no	ador
0909	1.5 (	0.40	207	(Q3	Closed	u	
0913	3	0.38	200	639	a	4	
0917	425	QU(	70.4	C041	ic	*~	

Purge Method:	DIP. TO	Sailer	
Sample Method:	Same	Well Integrity:	
Sample Time:	6927	Dissolved O <sub>2</sub> :	С
ICM	Oakton	%	mg/L

# GeoEnvironmental, Inc. 837 Shaw Road, Stockton, CA 95205 • (209) 467-1006 • Fax (209) 467-1118





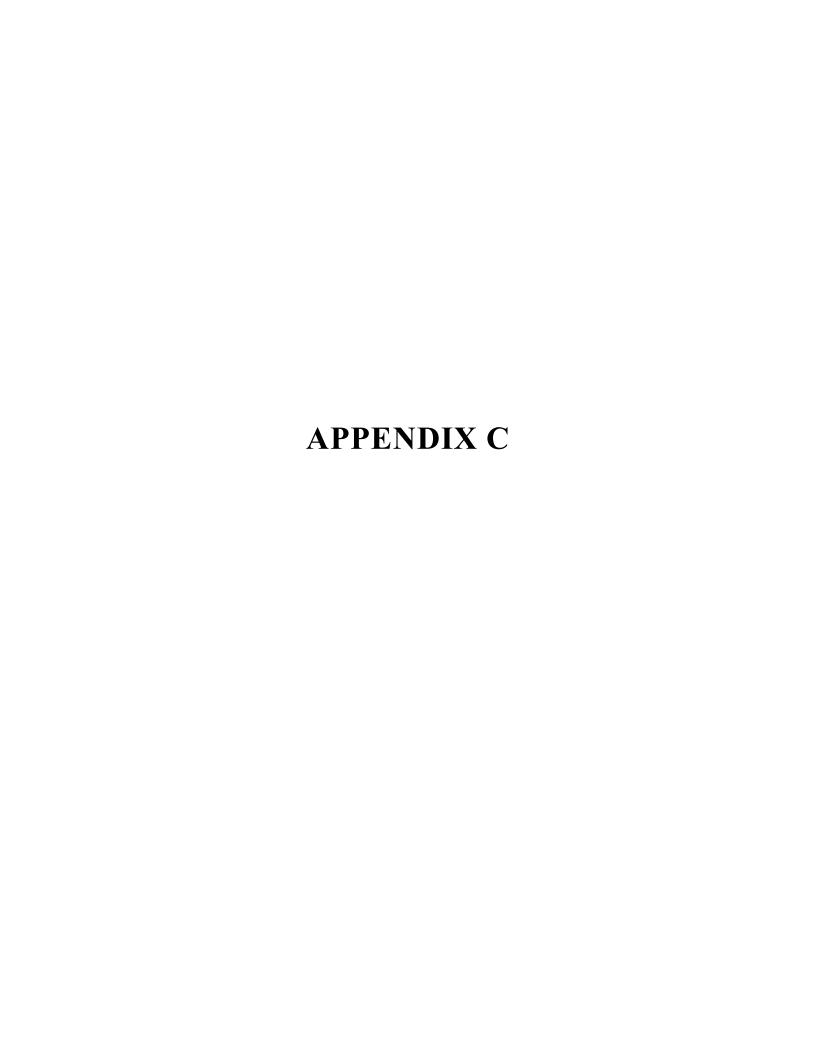
## Monitoring Well Field Log

#### Well Data

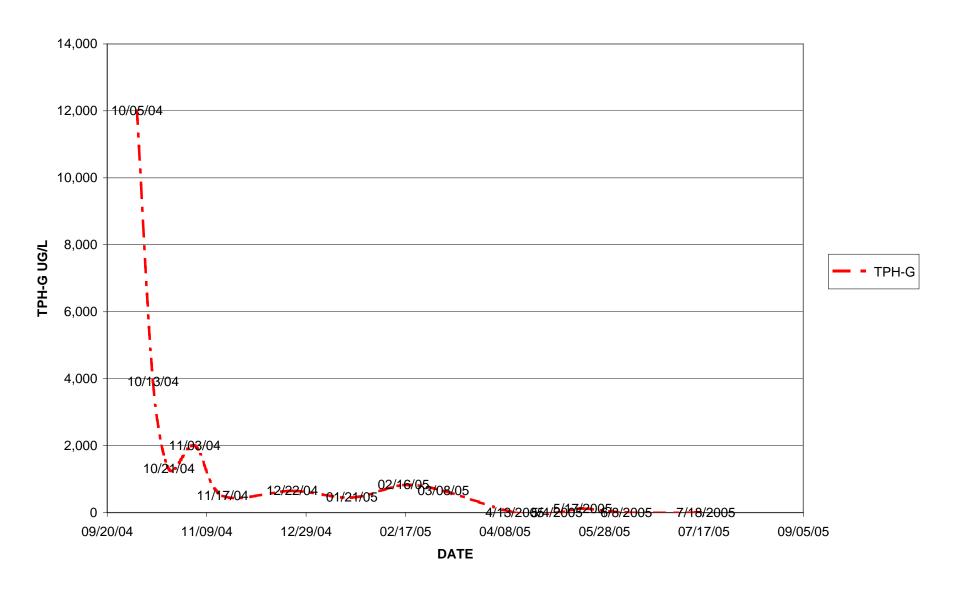
Project Name:	Project No.: Date:
MBP-LINDEN	AGE-NC-99-0645 7 1165
Pre-Purge DTW:9074 Time:0825	Well I.D.:
Post-Purge DTW: 90.96 Time: 64.43	Mw-3
Total Depth of Well: Well Volume:	Casing Diameter: 0.5" 2" 4" 6" 6" 0.16 0.65 1.47
Sampler(s):	Sample Containers:  1 Amber Liter & 3 VOAS
Sample I.D.: MW-3 /071105	Analysis: TPH-g / TPH-d / BTEX / OXYS

Time	Volume (gallons)	рН	Тетр.	Cond µS/cm X <u>100</u>	Color/ Turbidity	Notes
030	0	0.09	209	650	( Jordes	no open
0934	1.5	0-71	207	452	4 0	ч
0938	3	624	707	660	4	4
2942	4.5	Ce79	20.4	667	h	L
				:		

Purge Method:	DISP Bailer				
Sample Method:	Same	Well Integrity:			
Sample Time:	oaut	Dissolved O <sub>2</sub> :	С		
ICM	Oakton	%	mg/L		



#### **SOIL VAPOR EXTRACTION TREND**



6814 Rosecrans Avenue. Telephone: (562) 272-2700

Paramount, CA 90723-3146 Fax: (562) 272-2789

#### **ANALYTICAL RESULTS\***

CTEL Project No: Client Name:

CT214-0504131

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Attention:

Mr. Bill Little

Project ID: Project Name: Global ID: T0607700895 MBP – Linden SVE

Date Sampled: Date Received: 04/13/05 @ 10:39 am 04/14/05 @ 09:00 am

Date Analyzed

04/14/05

Matrix: Air

Phone: (209) 467-1006

Fax: (209) 467-1118

Laboratory ID: Client Sample ID: Dilution	0504-131-1 Influent-V 1	0504-131-2 Effluent-V 1	Method	Units:	Detection Limit
MtBE	ND	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	ND	ND	SW846 8260B	ug/L	0.5
Total Xylene	ND	ND	SW846 8260B	ug/L	1
TPH - Gasoline	ND	ND	EPA 8015M	ug/L	50

ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE		% SURROGATE RECOVE	RY Control Limit
Dibromofluoromethane	91	98	70-130
1,2 Dichloroethaned4	84	99	70-130
Toluene-d8	100	119	70-130
Bromofluorobenzene	91	91	70-130

Greg Tejirian Laboratory Director

R. Taholo Gr

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

Method:

8015M

Matrix:

Water

Date Analyzed:

4/14/05

Date Extracted:

4/14/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS		Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	966	1025	1000	97	102	70-130	20	5

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Method:

8260B

Matrix:

Water

Date Analyzed:

4/14/05

Date Extracted:

4/14/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	41	42	50	82	84	70-130	20	2
Benzene	44	47	50	88	94	70-130	20	6
Trichloroethene	45	46	50	90	92	70-130	20	2
Toluene	45	48	50	90	96	70-130	20	6
Chlorobenzene	46	46	50	92	92	70-130	20	0
m,p-Xylenes	86	89	100	86	89	70-130	20	3

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Perimeters	Method	Units	Det.
	Blank		Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
Ethanol	ND	ug/L	50
Methanol	ND	ug/ <b>L</b>	1000

Advanced GeoEnvironmental, Inc.

CHAIN, OF CUSTODY RECORD

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

Client Mel Bokides Petro.	Project	Project Manager  Tests Required	
	Phone	Phone Number	<u> </u>
	Sampl	Ho LUUD ers: (Signature)	Invoice:
Project Name MBP/LInDen		The second second	AGE Client
Sample Location Number Description	Date Time Water Comp. Grab.	Pe Solid No. of Conts.	
ZNF (uput / Vager	4/13/05 1039	ナ ナ ナ ー ナ	
EAFlyer / Vapor	4/13/05 1034	XXX	
	, ,		
Relinquished ht. (Signature)	Received by: (Signature)	HI305	209/
Relinquished by: (Signature)	Received by: (Signature)	/ /Date/Time	96
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	sis: (Signature)	96
Dispatched by: (Signature)	Date/Time Received	Received for Laboratory by:    Date/Time	9:00
Method of Shipment:	mes (A)	Laboratory Mame	
Special Instructions:		I hereby authorize the performance of the above indicated work.	work.
		The state of the s	

6814 Rosecrans Avenue, Telephone: (562) 272-2700

Paramount. CA 90723-3146 Fax: (562) 272-2789

#### ANALYTICAL RESULTS\*

CTEL Project No: CT214-0505044

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Phone: (209) 467-1006 Fax: (209) 467-1118

Attention:

Mr. Bill Little

Project ID:

Global ID: T0607700895

Project Name:

MBP - Linden

Date Sampled: Date Received:

05/04/05 @ 13:21 p.m.

05/05/05 @ 08:50 am

**Date Analyzed** 

05/05/05

Matrix: Air

Laboratory ID: Client Sample ID: Dilution	0505-044-1 Influent-V 1	0505-044-2 AFT-V 1	0505-044-3 Effluent-V 1	Method	Units:	Detection Limit
MtBE	5.1	ND	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	ND	ND	ND	SW846 8260B	ug/L	0.5
Total Xylene	ND	ND	ND	SW846 8260B	ug/L	1
TPH - Gasoline	ND	ND	ND	EPA 8015M	ug/L	50

#### ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE		%	SURROGATE RECOVERY	Control Limit
Dibromofluoromethane	98	95	102	70-130
1,2 Dichloroethaned4	99	80	98	70-130
Toluene-d8	100	99	90	70-130
Bromofluorobenzene	96	95	97	70-130

Greg Tejirian

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

Method:

8015M

Matrix:

Water

Date Analyzed:

5/5/05

Date Extracted:

5/5/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	1061	1033	1000	106	103	70-130	20	3
TPH - Diesel	2062	2045	2000	103	101	70-130	20	2

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50
TPH - Diesel	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Method:

8260B

Matrix:

Water

Date Analyzed:

5/5/05

Date Extracted:

5/5/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
and the state of t	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	44	44	50	88	88	70-130	20	0
Benzene	40	40	50	80	80	70-130	20	0
Trichloroethene	44	43	50	88	86	70-130	20	2
Toluene	47	48	50	94	96	70-130	20	2
Chlorobenzene	53	52	50	106	104	70-130	20	2
m,p-Xylenes	116	112	100	116	112	70-130	20	4

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Perimeters	Method Blank	Units	Det. Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	0.5
PCE	ND	ug/L	0.5

GeoEnvironmental, Inc.

770-50

CHAIN OF CUSTODY RECORD

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

AGE Client Invoice: I hereby authorize the performance of the above indicated work. 5/5/0 C Date/Time Notes **Tests Required** Name No. of Conts. Samplers: (Signature) Solid Received by Mobile Laboratory for field analysis: (Signature) (ged)467 Project Manage Phone Number Air Received for Sample Type Water Comp. | Grab. Received by: (Signature) Received by: (Signature) Date/Time Time Date Location Description Relinquished by: (Signature) Dispatched by: (Signature) Anthort Method of Shipment: Special Instructions: Project Name Client M Relinquished by Sample Number

Telephone: (562) 272-2700

Paramount, CA 90723-3146 Fax: (562) 272-2789

#### ANALYTICAL RESULTS\*

CTEL Project No: CT214-0505162

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Phone: (209) 467-1006 Fax: (209) 467-1118

Attention:

Stockton, CA 95215

Mr. Bill Little

Project ID: Project Name: Global ID: T0607700895

MBP - Linden

**Date Sampled:** Date Received: 05/17/05 @ 11:55 am 05/18/05 @ 09:00 am

Date Analyzed

05/18/05

Matrix: Air

Laboratory ID: Client Sample ID: Dilution	0505-162-1 Influent-V 1	0505-162-2 Effluent-V 1	Method	Units:	Detection Limit
MtBE	11	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	4.0	ND	SW846 8260B	ug/L	0.5
Total Xylene	7.3	ND	SW846 8260B	ug/L	1
TPH - Gasoline	120	ND	EPA 8015M	ug/L	50

#### ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE		% SURROGATE RECOVERY	Control Limit
Dibromofluoromethane	120	122	70-130
1,2 Dichloroethaned4	120	124	70-130
Toluene-d8	116	112	70-130
Bromofluorobenzene	92	88	70-130

Greg Tejirian

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

6814 Rosecrans Avenue. Telephone: (562) 272-2700 nount, CA 90723-3146 Fax: (562) 272-2789

## QA/QC Report

Method:

8015M

Matrix:

Water

Date Analyzed:

5/18/05

Date Extracted:

5/18/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	1089	1092	1000	109	109	70-130	20	0

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

6814 Rosecrans Avenue. Paramount, CA 90723-3146 Telephone: (562) 272-2700

8260B

Fax: (562) 272-2789

## QA/QC Report

Method:

Water Matrix:

5/18/05 Date Analyzed:

Date Extracted: 5/18/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
19 NAS 100 S 150 O C C C C	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	56	53	50	112	106	70-130	20	6
Benzene	47	50	50	94	100	70-130	20	6
Trichloroethene	45	47	50	90	94	70-130	20	4
Toluene	50	55	50	100	110	70-130	20	10
Chlorobenzene	55	61	50	110	122	70-130	20	12
m,p-Xylenes	115	121	100	115	121	70-130	20	6

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Perimeters	Method Blank	Units	Det. Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	1
PCE	ND	ug/L	1
Ethanol	ND	ug/L	1

CHAIN OF CUSTODY RECORD

GeoEnvironmental, Inc.

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

Tests Required	1/////	Invoice:	AGE Client	No. of Conts.	XX				Shring 160	LDate/Time	Sate/Time	S/18/05. 9.02	Laboratory Name	I hereby authorize the performance of the above indicated work.	(Les Ma)
Project Manager	Phone Number	Samplers: (Signature)	Colla	Date Time Water Solid Comp. Grab. Air	1/265 1155 X	X 51150			Received by: (Signature)	Received by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time Received for Laboratory by:	July 1		
Client Med Bokedes Postro.			Project Name MBP / Linger	Sample Location Number Description	In Plyens Maror	FSF luring / Union			Relinquished by (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)	Dispatched by: (Signature)	Method of Shipment:	Special Instructions:	

Telephone: (562) 272-2700

Fax: (562) 272-2789

#### ANALYTICAL RESULTS\*

CTEL Project No: CT214-0506081

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Phone: (209) 467-1006 Fax: (209) 467-1118

Matrix: Air

Attention:

Mr. Bill Little

Project ID:

Global ID: T0607700895

**Project Name:** 

MBP – Linden

Date Sampled: Date Received: 06/08/05 @ 13:35 p.m.

06/09/05 @ 08:30 am

Date Analyzed 06/09/05

Laboratory ID: Client Sample ID: Dilution	0506-081-1 Influent-V 1	0506-081-2 Effluent-V 1	Method	Units:	Detection Limit
MtBE	ND	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	ND	ND	SW846 8260B	ug/L	0.5
Total Xylene	ND	ND	SW846 8260B	ug/L	1
TPH - Gasoline	ND	ND	EPA 8015M	ug/L	50

#### ND = Not Detected at the indicated Detection Limit

SURROGATE SPIKE		% SURROGATE RECOVERY	Control Limi	
Dibromofluoromethane	120	123	70-130	
1,2 Dichloroethaned4	123	126	70-130	
Toluene-d8	98	101	70-130	
Bromofluorobenzene	79	83	70-130	

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

Method:

8015M

Matrix:

Water

Date Analyzed:

6/9/05

Date Extracted:

6/9/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	1170	1160	1000	117	116	70-130	20	1

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Method:

8260B

Matrix:

Water

Date Analyzed:

6/9/05

Date Extracted:

6/9/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	45	46	50	90	92	70-130	20	2
Benzene	52	51	50	104	102	70-130	20	2
Trichloroethene	43	42	50	86	84	70-130	20	2
Toluene	50	50	50	100	100	70-130	20	0
Chlorobenzene	53	54	50	106	108	70-130	20	2
m,p-Xylenes	112	113	100	112	113	70-130	20	1

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

Perimeters	Method Blank	Units	Det. Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	1
PCE	ND	ug/L	1

Adva.

Geo

Advanced GeoEnvironmental, Inc.

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

CHAIN OF CUSTODY RECORD

06-041

Tests Required		invoice:	/////	AGE	Notes						DateTime	Date/Time	Date/Time	Date/Fine		I hereby authorize the performance of the above indicated work.	Near	
3	1801	0000	X / / / / / / / / / / / / / / / / / / /	lant xigging	No. of		× × ×	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>					はない	Day Sul	Laboratory Name	I hereby authorize the per		is in the second
Project Manager	Phone Number	Samplers (Signature)		Carl	Sample Type Solid	ab. Air	+	+					Received by Mobile Laboratory for field analysis: (Signature)	Received for Laboratory by				
2				,	Date		Celshes 1335	045139131			Received by: (Signature)	Received by: (Signature)	Received by Mobile Laborate	Date/Time	Merricht			
Rollings Petro		4		MBP/Linder	Location	Description	J / 124.30 C	# /1/2 Dar			Signature)	jnature)	jnature)	ature)				
Client Me(				Project Name		Number	Int lush	E D Clima			Relinquished by: (Sig	Relinquished by: (Signature)	Relinquished by: (Signature)	Dispatched by: (Signature)	Method of Shipment:	Special Instructions:		

Telephone: (562) 272-2700

Fax: (562) 272-2789

#### ANALYTICAL RESULTS\*

CTEL Project No: CT214-0507105

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Phone: (209) 467-1006 Fax: (209) 467-1118

Attention:

Mr. Bill Little

Project ID:

Global ID: T0607700895

Project Name:

MBP - Linden

Date Sampled: Date Received: 07/18/05 @ 13:44 p.m. 07/19/05 @ 09:00 am

**Date Analyzed** 

07/19/05

Matrix: Air

Laboratory ID: Client Sample ID: Dilution	0507-105-1 Influent-V 1	0507-105-2 Effluent-V I	Method	Units:	Detection Limit
MtBE	ND	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	ND	ND	SW846 8260B	ug/L	0.5
Total Xylene	ND	ND	SW846 8260B	ug/L	1
TPH - Gasoline	ND	ND	EPA 8015M	ug/L	50

#### ND = Not Detected at the indicated Detection Limit

	% SURROGATE RECOVERY	Control Limit
99	91	70-130
121	119	70-130
115	99	70-130
	111	70-130
	121 115	99 91 121 119

K. Yoghowh Gu Greg Tejirian

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

Method:

8015M

Telephone: (562) 272-2700

Matrix:

Water

Date Analyzed:

7/19/05

Date Extracted:

7/19/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	992	918	1000	99	92	70-130	20	8

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

6814 Rosecrans Avenue, Telephone: (562) 272-2700

Paramount, CA 90723-3146 Fax: (562) 272-2789

## QA/QC Report

Method:

8260B

Matrix:

Water

Date Analyzed:

7/19/05

Date Extracted:

7/19/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	43	44	50	86	88	70-130	20	2
Benzene	47	48	50	94	96	70-130	20	2
Trichloroethene	49	48	50	98	96	70-130	20	2
Toluene	50	51	50	100	102	70-130	20	2
Chlorobenzene	49	51	50	98	102	70-130	20	4
m,p-Xylenes	98	103	100	98	103	70-130	20	5

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

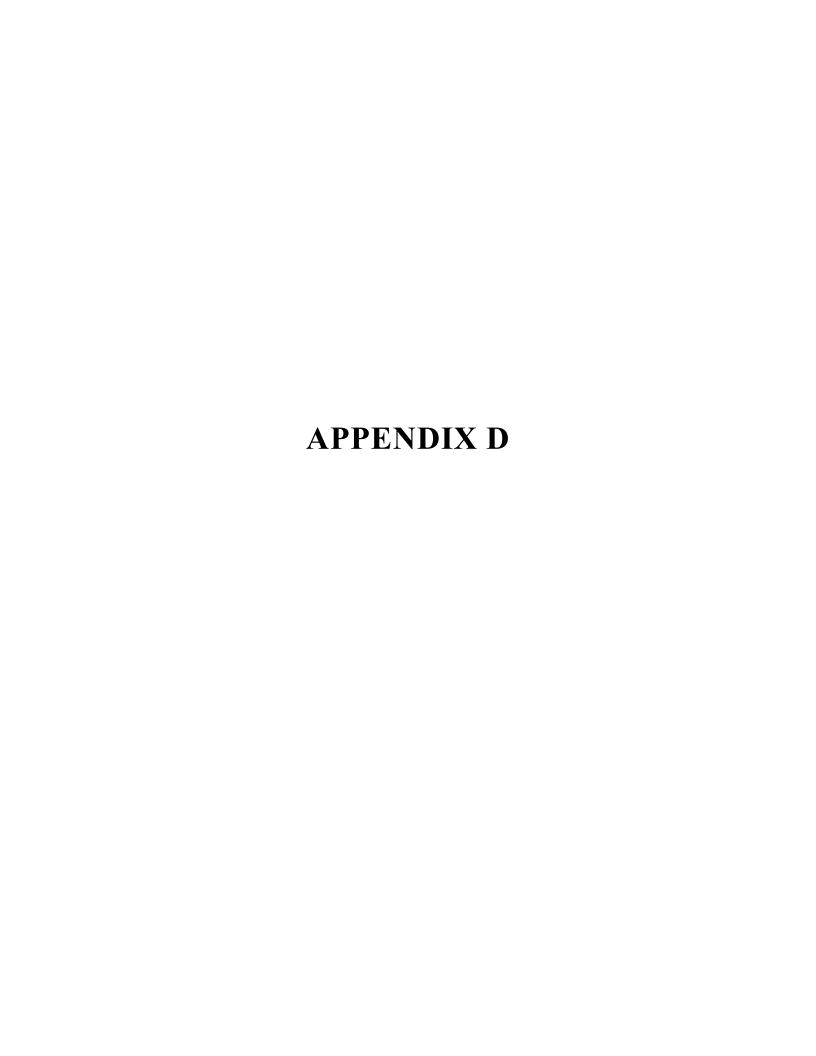
Perimeters	Method	Units	Det. Limit
	Blank		Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/ <b>L</b>	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	0.5
PCE	ND	ug/L	0.5

GeoEnvironmental, Inc. Advanced

C7-105 CHAIN OF GUSTODY RECORD

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

Client Mel Bokishes Retro.	Project Manager	Tests Required
e e	Prione-Number	
	Samplers: (Signature)	Invoice:
Project Name M.R.D. ILINGA	<u>~</u> 3	AGE Z
Sample Location Number Description	Date Time Sample Type Solid No. of Conts.	Notes
Tor Then I Warn	18651344 × WXX	
FATHERY MAJOR	-1/18/05/350 X 1 X	
Relinquished by (Sighature)	Received by: (Signature)	7/18/05/ 1000
Relinquished by: (Signature)	Received by: (Signature)	/ Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature)	Date/Time Received for Laboratory by:	0900 0900
Method of Shipment:	Representation Name	3
Special Instructions:	I hereby authorize/the	e performance of the above indicated work.
		Le Man



#### Appendix D

#### Soil-Vapor Extraction Volume-Mass Calculations Former Mel Bokides Petroleum - Linden 8203 East Highway 26, Stockton, California

The hydrocarbon mass removed during the operating period can be calculated using the following equation:  $M = C \cdot O \cdot t$ 

where: M = cumulative mass recovered (kg)

C = vapor concentration (kg/m<sup>3</sup>)

 $O = \text{extraction flow rate } (m^3/\text{hr})$ 

t = operational period (hrs)

The calculations for the determination of volume and mass of hydrocarbons removed over the reporting period are provided below:

#### 03-17-05 to 04-13-05

```
using: C<sub>vapor</sub> = (650+<50 μg/l [50]) ÷ 2 = 350 micrograms per liter converted to 0.00035 kg/m³

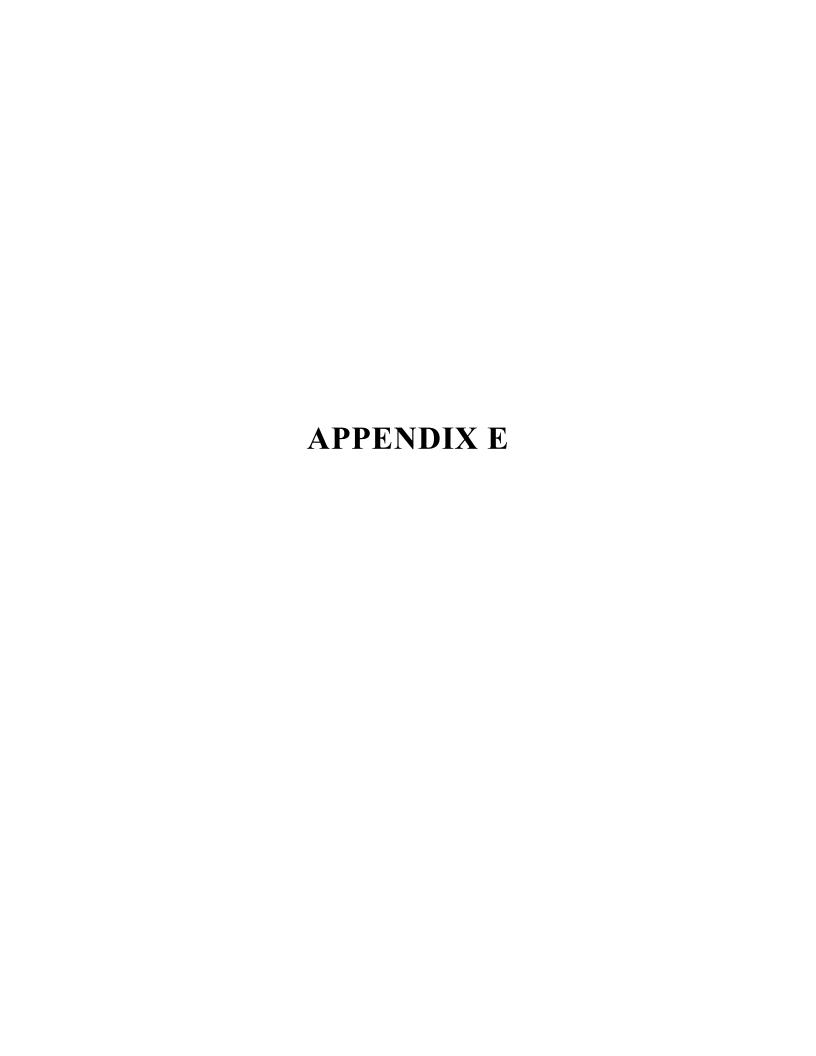
Q = 85 scfm (average) x 1.69 = 143 m³/hr
t = 504 hours (sum of known operation)

0.00035 kg/m³ • 143 m³/hr • 504 hours = 25.2 kg gasoline
25.2 kg gasoline • 2.205 lbs/kg = 55.6 lbs gasoline
to convert lbs gasoline to gallons gasoline, use 0.16 gal/lb:
55.6 lbs • 0.16 gal/lb = 8.89 gallons of gasoline
```

#### 05-04-05 to 06-08-05

```
using: C_{vapor} = (120 \ \mu g/l) \div 2 = 60 \ micrograms per liter converted to 0.00006 \ kg/m^3 Q = 63 \ scfm \ (average) \ X \ 1.69 = 107 \ m^3/hr t = 768 \ hours \ (sum \ of \ known \ operation) 0.00006 \ kg/m^3 \bullet 107 \ m^3/hr \bullet 768 \ hours = 4.9 \ kg \ gasoline 4.9 \ kg \ gasoline \bullet 2.205 \ lbs/kg = 10.8 \ lbs \ gasoline to convert lbs gasoline to gallons gasoline, use 0.16 \ gal/lb : 10.8 \ lbs \bullet 0.16 \ gal/lb = 1.73 \ gallons \ of gasoline
```

Approximately 30.1 kg (66.4 pounds), or 10.62 gallons of hydrocarbons were extracted by the SVE system between March and June 2005. Approximately 1,204 lbs, or 192 gallons, of gasoline were extracted by the SVE system since 05 October 2004.



6814 Rosecrans Avenue, Telephone: (562) 272-2700

Paramount, CA 90723-3146 Fax: (562) 272-2789

#### ANALYTICAL RESULTS\*

CTEL Project No: CT214-0504117

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Phone: (209) 467-1006 Fax: (209) 467-1118

Attention:

Mr. Bill Little

Project ID:

Global ID: T0607700895

Project Name:

MBP / Linden

Date Sampled: Date Received:

Date Analyzed

04/12/05 @ 09:59 am 04/13/05 @ 08:55 am

04/13/05 - 04/14/05

Matrix: Water

Laboratory ID: Client Sample ID: Dilution	0504-117-1 MW1 1	0504-117-2 MW2 1	0504-117-3 MW3 1	Method	Units:	Detection Limit
TPH - Gasoline	ND	ND	ND	EPA 8015M	ug/L	50
TPH – Diesel	ND	ND	ND	EPA 8015M	ug/L	50

VOC, 8260B						
Dilution	1	1	1			
Methyl-tert-butyl-ether(MtBE)	ND	ND	ND	SW846 8260B	ug/L	
t-Butyl Alcohol (TBA)	ND	ND	ND	SW846 8260B	ug/L	10
Diisopropyl Ether (DIPE)	ND	ND	ND	SW846 8260B	ug/L	. 1
Ethyl-t-butyl ether (ETBE)	ND	ND	ND	SW846 8260B	ug/L	1
t-Amyl Methyl Ether (TAME)	ND	ND	ND	SW846 8260B	ug/L	
1,2-Dichloroethane	ND	ND	ND	SW846 8260B	ug/L	0.5
1,2-Dibromoethane(EDB)	ND	ND	ND	SW846 8260B	ug/L	0.5
Benzene	ND	ND	ND	SW846 8260B	ug/L	0.5
Toluene	ND	ND	ND	SW846 8260B	ug/L	0.5
Ethylbenzene	ND	ND	ND	SW846 8260B	ug/L	0.5
m,p-Xylene	ND	ND	ND	SW846 8260B	ug/L	0.6
o-Xylene	ND	ND	ND	SW846 8260B	ug/L	0.6

#### ND = Not Detected at the indicated Detection Limit

Control Editor
70-130 70-130
70-130
70-130 70-130

Greg Tejirlan

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

Method:

8015M

Matrix:

Water

Date Analyzed:

4/13/05

Date Extracted:

4/13/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	<b>9</b> 50	1010	1000	95	101	70-130	20	6
TPH - Diesel	1930	1970	2000	97	99	70-130	20	2

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50
TPH - Diesel	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

# QA/QC Report

Method:

8260B

Matrix:

Water

Date Analyzed:

4/13/05

Date Extracted:

4/13/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	46	50	50	92	100	70-130	20	8
Benzene	51	51	50	102	102	70-130	20	0
Trichloroethene	50	51	50	100	102	70-130	20	2
Toluene	49	49	50	98	98	70-130	20	0
Chlorobenzene	48	54	50	96	108	70-130	20	12
m,p-Xylenes	103	107	100	103	107	70-130	20	4

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

RPD: Relative Percent Difference of LCS and LCSD

Perimeters	Method Blank	Units	Det. Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	7
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
Ethanol	ND	ug/L	5 <b>0</b>
Methanol	ND	ug/L	1000

Advanced
GeoEnvi

CHAIN OF CUSTODY RECORD

GeoEnvironmental, Inc.

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118

Client Mel-Rokides		Project Manager		Tests Required
		Phone Number		
×.		(204) ム(のユー(004 Samplers: (Signature)	1,000	Invoice:
Project Name WBP Lindon			3357	AGE K
Sample Location Number Description	Date Time	Sample Type Water Comp. Grab. Air	No. of Conts.	Notes
Mul / Juny   Juny	4/12/05 0959	2	シ タ ヌ ヌ ズ ゴ	
Jun / 12mm	non	L	メメメ、	
Mas 1 mas	J. Contra	2	XXX X	
6	-			
Refinquished by: (Signature)	Received by: (Signature)			Date/Time
Refinquished by: (Signature)	Received by: (Signature)			Date/Time
Relinquished by: (Signature)	Received by Mobile Labo	Received by Mobile Laboratory for field analysis: (Signature)	5747	Date/Time
Dispatched by: (Signature)	Date/Time	Received for Uaboffatoryby:		4/3/05 0853
Method of Shipment: Coll Overming M	M. T.		Laboratory Name	SON /
Special Instructions:	DE 1		I hereby authorize the faction	I hereby authorize the parformance of the above indicated work.

# CAL TECH Environmental Laboratories

Telephone: (562) 272-2700

Paramount, CA 90723-3146 Fax: (562) 272-2789

# ANALYTICAL RESULTS\*

CTEL Project No: CT214-0507049

Client Name:

Advanced Geo Environmental, Inc.

837 Shaw Road

Stockton, CA 95215

Phone: (209) 467-1006 Fax: (209) 467-1118

Attention:

Mr. Bill Little

Project ID:

Global ID: T0607700895

Project Name:

MBP / Linden

**Date Sampled:** Date Received: 07/11/05 @ 08:54 am 07/12/05 @ 09:00 am 07/12/05 - 07/13/05

Matrix: Water

SW846 8260B

SW846 8260B

SW846 8260B

ug/L

ug/L

ug/L

0.5

0.6

0.6

Date Analyzed

Units: Detection 0507-049-3 Method Laboratory ID: 0507-049-1 0507-049-2 Limit MW1 MW2 MW3 Client Sample ID: 1 Dilution 1 1 ug/L 50 ND EPA 8015M ND TPH - Gasoline ND ug/L 50 EPA 8015M ND ND ND TPH - Diesel VOC, 8260B 1 Dilution 1 1 SW846 8260B ug/L 1 Methyl-tert-butyl-ether(MtBE) ND ND ND 10 ND SW846 8260B ug/L t-Butyl Alcohol (TBA) ND ND SW846 8260B ug/L 1 Diisopropyl Ether (DIPE) ND ND ND 1 SW846 8260B ug/L Ethyl-t-butyl ether (ETBE) ND ND ND SW846 8260B ug/L 1 t-Amyl Methyl Ether (TAME) ND ND ND 0.5 SW846 8260B ug/L 1,2-Dichloroethane ND ND ND 0.5 1,2-Dibromoethane(EDB) SW846 8260B ug/L ND ND ND SW846 8260B ug/L 0.5 ND ND Benzene ND 0.5 ug/L ND ND SW846 8260B Toluene ND

ND

ND

ND

ND = Not Detected at the indicated Detection Limit

ND

ND

ND

SURROGATE SPIKE		% SUI	RROGATE RECOVERY	Control Limit
Dibromofluoromethane	106	113	108	70-130
1,2 Dichloroethaned4	112	113	112	70-130
Toluene-d8	98	99	101	70-130
Bromofluorobenzene	95	95	95	70-130
R. Tophondi Fr				

ND

ND

ND

Greg Tejirian

Ethylbenzene

m,p-Xylene

o-Xylene

Laboratory Director

Cal Tech Environmental Laboratories, Inc. ELAP ID #: 2424

<sup>\*</sup>The results are base upon the sample received.

# QA/QC Report

Method:

8015M

Matrix:

Water

Date Analyzed:

7/12/05

Date Extracted:

7/12/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
TPH - Gasoline	1130	1190	1000	113	119	70-130	20	6
TPH - Diesel	2130	2095	2000	107	105	70-130	20	2

Perimeters	Method Blank	Units	Det. Limit
TPH - Gasoline	ND	ug/L	50
TPH - Diesel	ND	ug/L	50

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

RPD: Relative Percent Difference of LCS and LCSD

# QA/QC Report

Method:

8260B

Matrix:

Water

Date Analyzed:

7/12/05

Date Extracted:

7/12/05

Perimeters	Conc.	ug/L	Spike	Recovery	%	Control	Limits	RPD
en en la companya de la companya en managara ya en al companya en	LCS	LCSD	Added	LCS	LCSD	Rec.	RPD	
1,1-Dichloroethene	45	45	50	90	90	70-130	20	0
Benzene	53	50	50	106	100	70-130	20	6
Trichloroethene	43	42	50	86	84	70-130	20	2
Toluene	43	44	50	86	88	70-130	20	2
Chlorobenzene	42	41	50	84	82	70-130	20	2
m,p-Xylenes	108	106	100	108	106	70-130	20	2

LCS: Laboratory Control Standard

LCSD: Laboratory Control Standard Duplicate

RPD: Relative Percent Difference of LCS and LCSD

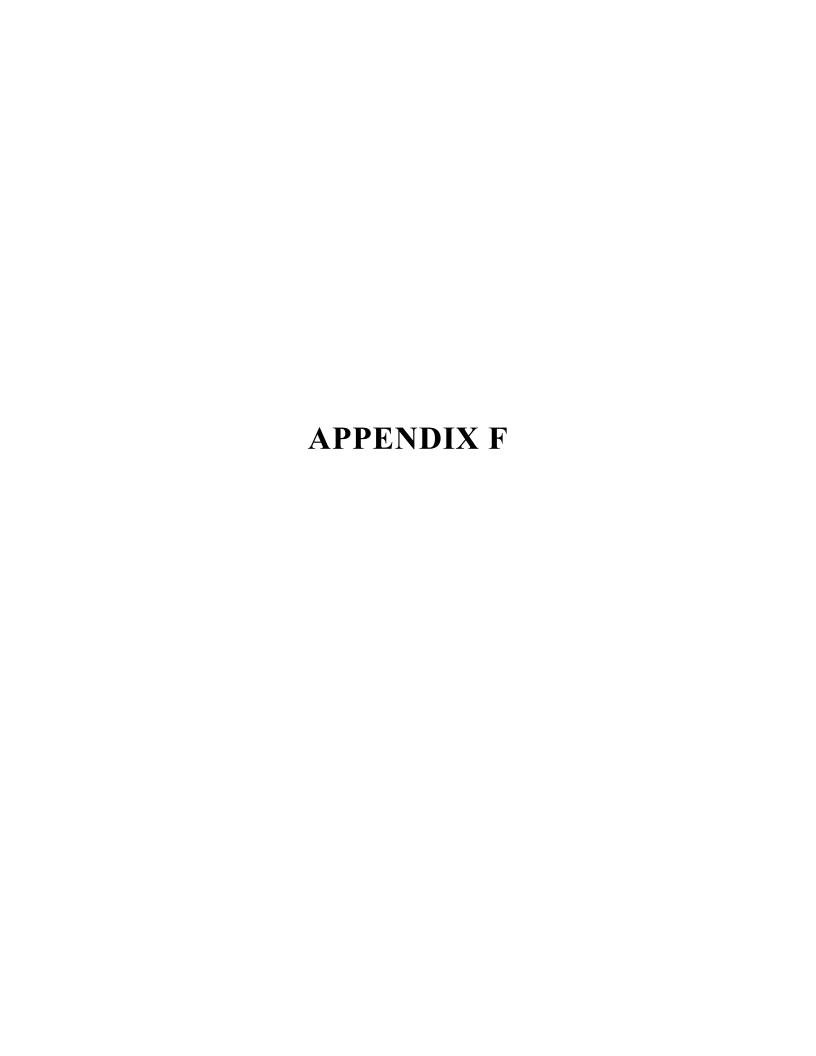
Perimeters	Method	Units	Det.
	Blank		Limit
1,1-Dichloroethene	ND	ug/L	1
Benzene	ND	ug/L	0.5
Trichloroethene	ND	ug/L	0.5
Toluene	ND	ug/L	0.5
Chlorobenzene	ND	ug/L	0.5
m,p-Xylenes	ND	ug/L	0.6
MTBE	ND	ug/L	1
TBA	ND	ug/L	10
DIPE	ND	ug/L	1
ETBE	ND	ug/L	1
TAME	ND	ug/L	1 .
1,2-Dichloroethane	ND	ug/L	0.5
EDB	ND	ug/L	0.5
Ethylbenzene	ND	ug/L	0.5
o-Xylene	ND	ug/L	0.6
TCE	ND	ug/L	1
PCE	ND	ug/L	1

837 Shaw Road - Stockton, California - 95215 - (209) 467-1006 - Fax (209) 467-1118 GeoEnvironmental, Inc. Advanced

CHAIN OF CUSTODY RECORD

900 C G

- 64)	Tests Required	KING	Invoice:	AGE Y Client	Notes					7		OTLOS (103	Date/Time	Date/Time	Date/Time	. Oh	I hereby authorize the performance on the above indicated work.	2
· \	Manager	Prione Number 1000 - 1000	Samplers: (Signature)	がかってく	Air Solid No. of Air	クダスプ	222	2225					! < t v	S: (Signature)	Received for Laboratory by: Will Min.	Laboratory Name	I hereby authorize the perfo	3
	Project	Phone	Sample	S Lagrange C	Date Time Water Comp. Grab.	7 1000 000	2 2240 -	2 Card				Received by: (Signature)	Received by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time Received	Monday	THE REPORT OF THE PARTY OF THE	
	Client MBP, ALC			Project Name Project Name	Sample Location Number Description	WINTURS LAW	2mm( 1 t/2m	UZI / 10003			0	Relinquished by Signature)	Reinquished by: (Stgndture)	Relinquished by: (Signature)	Dispatched by: (Signature)	Method of Shipment:	Special Instructions:	



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Confirmation Number: 3626609504

**Date/Time of Submittal:** 10/19/2005 2:52:49 PM

**Facility Global ID:** T0607700895 **Facility Name:** MBP LINDEN **Submittal Title:** 2nd Qrt 2005

**Submittal Type:** GW Monitoring Report

## Click here to view the detections report for this upload.

MBP LINDEN 8203 HWY 26 E STOCKTON, CA 95206	Regional Board - Case #: 3910 CENTRAL VALLEY RWQCE Local Agency (lead agency) - SAN JOAQUIN COUNTY LO	3 (REGION 5S) - <u>Case #: 000691</u>	(JLB
CONF # 3626609504 SUBMITTED BY Christopher Miller	TITLE 2nd Qrt 2005 SUBMIT DATE STATUS 10/19/2005 PENDIN	QUARTER Q2 2005 IG REVIEW	
SAMPLE DETECTIONS	REPORT		
# FIELD POINTS SAMPLED			3
# FIELD POINTS WITH DET	ECTIONS		0
# FIELD POINTS WITH WAT	ER SAMPLE DETECTIONS ABOVE MC	L	0
SAMPLE MATRIX TYPES		W	ATER
METHOD QA/QC RE	PORT		
METHODS USED		8260FAB,M	8015
TESTED FOR REQUIRED AN	ALYTES?		N
MISSING PARAMETERS N	OT TESTED:		
- 8260FAB REQUIRES ET	HANOL TO BE TESTED		
- 8260FAB REQUIRES XY	LENES TO BE TESTED		
LAB NOTE DATA QUALIFIER	S		N
QA/QC FOR 8021/3	3260 SERIES SAMPLES		
TECHNICAL HOLDING TIME	VIOLATIONS		0
METHOD HOLDING TIME VI	OLATIONS		0
LAB BLANK DETECTIONS AI	BOVE REPORTING DETECTION LIMIT		0
LAB BLANK DETECTIONS			0
DO ALL BATCHES WITH THI	8021/8260 SERIES INCLUDE THE F	OLLOWING?	
- LAB METHOD BLANK			Υ
- MATRIX SPIKE			N
- MATRIX SPIKE DUPLICAT	E		N
- BLANK SPIKE			N
- SURROGATE SPIKE - N	ON-STANDARD SURROGATE USED		N
WATER SAMPLES FO	R 8021/8260 SERIES		
MATRIX SPIKE / MATRIX SF	IKE DUPLICATE(S) % RECOVERY BE	ΓWEEN 65-135%	n/a
	IKE DUPLICATE(S) RPD LESS THAN 3		n/a

SURROGATE SPIKES % R	ECOVERY BETWEEN 85-115%		n/a
BLANK SPIKE / BLANK SP	IKE DUPLICATES % RECOVERY I	BETWEEN 70-130%	n/a
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX	SPIKE DUPLICATE(S) % RECOVE	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX	SPIKE DUPLICATE(S) RPD LESS	THAN 30%	n/a
			- 1-
SURROGATE SPIKES % R	ECOVERY BETWEEN 70-125%		n/a
	ECOVERY BETWEEN 70-125% IKE DUPLICATES % RECOVERY I	BETWEEN 70-130%	n/a n/a
	IKE DUPLICATES % RECOVERY I	BETWEEN 70-130%	
BLANK SPIKE / BLANK SP	IKE DUPLICATES % RECOVERY I	DETECTIONS >	n/a
BLANK SPIKE / BLANK SP FIELD QC SAMPLES	IKE DUPLICATES % RECOVERY I		n/a
BLANK SPIKE / BLANK SP FIELD QC SAMPLES SAMPLE	IKE DUPLICATES % RECOVERY I  COLLECTED		n/a

Logged in as AGE-STOCKTON (AUTH\_RP)

CONTACT SITE ADMINISTRATOR.

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**Confirmation Number:** 3706064045

**Date/Time of Submittal:** 10/19/2005 2:55:21 PM

Facility Global ID: T0607700895
Facility Name: MBP LINDEN
Submittal Title: 3rd Qrt 2005

**Submittal Type:** GW Monitoring Report

## Click here to view the detections report for this upload.

MBP LINDEN 8203 HWY 26 E STOCKTON, CA 95206	Local Agency (lea	Case #: 391080 EY RWQCB (REGION 5: ad agency) - Case #: 00069 COUNTY LOP - (ML)	
CONF# 3706064045 SUBMITTED BY Christopher Miller	TITLE 3rd Qrt 2005 SUBMIT DATE 10/19/2005	QUARTER Q3 2005 <u>STATUS</u> PENDING REVIEW	
SAMPLE DETECTIONS	REPORT		
# FIELD POINTS SAMPLED	IXEI OIXI		3
# FIELD POINTS WITH DETE	CTIONS		0
# FIELD POINTS WITH WATE		IS ABOVE MCI	0
SAMPLE MATRIX TYPES	in ordini de De leo l'Ion	IO ABOVE MIGE	WATER
MISSING PARAMETERS NO - 8260FAB REQUIRES ETH - 8260FAB REQUIRES XYL LAB NOTE DATA QUALIFIERS	IANOL TO BE TESTED ENES TO BE TESTED		N
QA/QC FOR 8021/8 TECHNICAL HOLDING TIME V		MPLES	0
METHOD HOLDING TIME VIC			0
LAB BLANK DETECTIONS ABO		CTION LIMIT	0
LAB BLANK DETECTIONS DO ALL BATCHES WITH THE			0
- LAB METHOD BLANK			Υ
- MATRIX SPIKE			N
- MATRIX SPIKE DUPLICATI	E		N
- BLANK SPIKE			N
- SURROGATE SPIKE			Υ
WATER SAMPLES FOR	8021/8260 SERIE	s	
		ECOVERY BETWEEN 65-135	% n/a
MATRIX SPIKE / MATRIX SPI	NE DUPLICATEIST 10 K		70 II/a

WATER SAMPLES FO	PIKE DUPLICATE(S) % RECOV	TEDV DETWEEN 4E 12E0/	n/a
	• • • • • • • • • • • • • • • • • • • •		n/a
	IKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		,
	RROGATE SPIKES % RECOVERY BETWEEN 85-115% ANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
0011 044101 50 500	000 <i>11</i> 0000 055150		
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a	
FIELD QC SAMPLES			
SAMPLE	COLLECTED	DETECTIONS >	REPDL
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	

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**MBP LINDEN 2ND QRT Submittal Title:** 

2005

Submittal Date/Time: 10/19/2005 3:01:46 PM

Confirmation 4548492252

Number:

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## **UPLOADING A GEO\_WELL FILE**

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**MBP LINDEN 3RD QRT Submittal Title:** 

2005

Submittal Date/Time: 10/19/2005 3:11:07 PM

Confirmation 2359800577

Number:

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Confirmation Number: 1005892276

**Date/Time of Submittal:** 10/19/2005 3:23:34 PM

Facility Global ID: T0607700895 Facility Name: MBP LINDEN

**Submittal Title:** 04-13-05 REMEDATION VAPOR

**Submittal Type:** Remediation O & M Reports

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MBP LINDEN Regional Board - Case #: 391080

8203 HWY 26 E CENTRAL VALLEY RWQCB (REGION 5S) - (JLB) STOCKTON, CA 95206

Local Agency (lead agency) - Case #: 000691

SAN JOAQUIN COUNTY LOP - (ML)

CONF# **QUARTER** 1005892276 04-13-05 REMEDATION VAPOR Q2 2005

SUBMITTED BY **STATUS** SUBMIT DATE

Christopher Miller 10/19/2005 PENDING REVIEW

## SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED 2 # FIELD POINTS WITH DETECTIONS 0 # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES AIR - UNK. ORIGIN

## METHOD QA/QC REPORT

METHODS USED 8260FAB,M8015 TESTED FOR REQUIRED ANALYTES?

MISSING PARAMETERS NOT TESTED:

- 8260FAB REQUIRES ETBE TO BE TESTED
- 8260FAB REQUIRES TAME TO BE TESTED
- 8260FAB REQUIRES DIPE TO BE TESTED
- 8260FAB REQUIRES TBA TO BE TESTED
- 8260FAB REQUIRES DCA12 TO BE TESTED
- 8260FAB REQUIRES EDB TO BE TESTED
- 8260FAB REQUIRES ETHANOL TO BE TESTED

LAB NOTE DATA QUALIFIERS

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS 0 METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS 0 DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? Υ

- LAB METHOD BLANK - MATRIX SPIKE

N - MATRIX SPIKE DUPLICATE Ν Ν - BLANK SPIKE

SURROGATE SPIKE - NON-STANDARD SURROGATE USED

N

WATER SAMPLES FO	PIKE DUPLICATE(S) % RECOV	TEDV DETWEEN 4E 12E0/	n/a
	• • • • • • • • • • • • • • • • • • • •		n/a
	IKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		,
	RROGATE SPIKES % RECOVERY BETWEEN 85-115% ANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
0011 044101 50 500	000 <i>11</i> 0000 055150		
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a	
FIELD QC SAMPLES			
SAMPLE	COLLECTED	DETECTIONS >	REPDL
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	

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Confirmation Number: 3589436233

**Date/Time of Submittal:** 10/19/2005 3:50:56 PM

Facility Global ID: T0607700895 **Facility Name: MBP LINDEN** 

Submittal Title: 05-04-2005 REMEDIATION VAPOR

Submittal Type: Remediation O & M Reports

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MBP LINDEN Regional Board - Case #: 391080

8203 HWY 26 E CENTRAL VALLEY RWQCB (REGION 5S) - (JLB) STOCKTON, CA 95206

Local Agency (lead agency) - Case #: 000691

SAN JOAQUIN COUNTY LOP - (ML)

**QUARTER** CONF# 3589436233 05-04-2005 REMEDIATION VAPOR Q2 2005

SUBMITTED BY **STATUS** SUBMIT DATE

PENDING REVIEW Christopher Miller 10/19/2005

## SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED 3 # FIELD POINTS WITH DETECTIONS # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES AIR - UNK. ORIGIN

## METHOD QA/QC REPORT

METHODS USED 8260FAB,M8015 TESTED FOR REQUIRED ANALYTES?

MISSING PARAMETERS NOT TESTED:

- 8260FAB REQUIRES ETBE TO BE TESTED
- 8260FAB REQUIRES TAME TO BE TESTED
- 8260FAB REQUIRES DIPE TO BE TESTED
- 8260FAB REQUIRES TBA TO BE TESTED
- 8260FAB REQUIRES DCA12 TO BE TESTED
- 8260FAB REQUIRES EDB TO BE TESTED
- 8260FAB REQUIRES ETHANOL TO BE TESTED

LAB NOTE DATA QUALIFIERS

## QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS 0 METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS 0 DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?

- LAB METHOD BLANK

Υ - MATRIX SPIKE N - MATRIX SPIKE DUPLICATE Ν

Ν - BLANK SPIKE SURROGATE SPIKE - NON-STANDARD SURROGATE USED

N

WATER SAMPLES FO MATRIX SRIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	FDV RFTWFFN 65-135%	n/a
	` '		n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% SURROGATE SPIKES % RECOVERY BETWEEN 85-115%		n/a	
	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		n/a	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a	
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
FIELD QC SAMPLES			
<u>SAMPLE</u>	COLLECTED	<u>DETECTIONS &gt;</u>	REPDL
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	

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Confirmation Number: 8970614850

**Date/Time of Submittal:** 10/19/2005 3:37:55 PM

Facility Global ID: T0607700895 **Facility Name: MBP LINDEN** 

**Submittal Title:** 05-17-2005 remediation vapor **Submittal Type:** Remediation O & M Reports

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MBP LINDEN Regional Board - Case #: 391080

8203 HWY 26 E CENTRAL VALLEY RWQCB (REGION 5S) - (JLB) STOCKTON, CA 95206

Local Agency (lead agency) - Case #: 000691

SAN JOAQUIN COUNTY LOP - (ML)

CONF# **QUARTER** 8970614850 05-17-2005 remediation vapor Q2 2005

SUBMITTED BY SUBMIT DATE **STATUS** 

Christopher Miller 10/19/2005 PENDING REVIEW

## SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED 2 # FIELD POINTS WITH DETECTIONS # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES AIR - UNK. ORIGIN

## METHOD QA/QC REPORT

METHODS USED 8260FAB,M8015 TESTED FOR REQUIRED ANALYTES?

MISSING PARAMETERS NOT TESTED:

- 8260FAB REQUIRES ETBE TO BE TESTED
- 8260FAB REQUIRES TAME TO BE TESTED
- 8260FAB REQUIRES DIPE TO BE TESTED
- 8260FAB REQUIRES TBA TO BE TESTED
- 8260FAB REQUIRES DCA12 TO BE TESTED
- 8260FAB REQUIRES EDB TO BE TESTED
- 8260FAB REQUIRES ETHANOL TO BE TESTED

LAB NOTE DATA QUALIFIERS

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS 0 METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS 0 DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?

- LAB METHOD BLANK

Υ - MATRIX SPIKE N - MATRIX SPIKE DUPLICATE Ν Ν

- BLANK SPIKE SURROGATE SPIKE - NON-STANDARD SURROGATE USED

N

SURROGATE SPIKES % R	ECOVERY BETWEEN 85-115%		Υ
BLANK SPIKE / BLANK SF	PIKE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX	SPIKE DUPLICATE(S) % RECOVE	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX	SPIKE DUPLICATE(S) RPD LESS	THAN 30%	n/a
SURROGATE SPIKES % R	ECOVERY BETWEEN 70-125%		n/a
	ECOVERY BETWEEN 70-125% PIKE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a n/a
	PIKE DUPLICATES % RECOVERY	BETWEEN 70-130%	
BLANK SPIKE / BLANK SF	PIKE DUPLICATES % RECOVERY	BETWEEN 70-130%  DETECTIONS >	n/a
BLANK SPIKE / BLANK SF	IKE DUPLICATES % RECOVERY		n/a
BLANK SPIKE / BLANK SF FIELD QC SAMPLES SAMPLE	COLLECTED		n/a

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Confirmation Number: 6310656905

**Date/Time of Submittal:** 10/19/2005 3:39:49 PM

Facility Global ID: T0607700895 **Facility Name: MBP LINDEN** 

**Submittal Title:** 06-08-2005 remediation vapor **Submittal Type:** Remediation O & M Reports

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MBP LINDEN Regional Board - Case #: 391080

8203 HWY 26 E CENTRAL VALLEY RWQCB (REGION 5S) - (JLB) STOCKTON, CA 95206

Local Agency (lead agency) - Case #: 000691

SAN JOAQUIN COUNTY LOP - (ML)

CONF# **QUARTER** 6310656905 06-08-2005 remediation vapor Q2 2005

SUBMITTED BY SUBMIT DATE **STATUS** 

Christopher Miller 10/19/2005 PENDING REVIEW

#### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED 2 # FIELD POINTS WITH DETECTIONS 0 # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES AIR - UNK. ORIGIN

## METHOD QA/QC REPORT

METHODS USED 8260FAB,M8015 TESTED FOR REQUIRED ANALYTES?

MISSING PARAMETERS NOT TESTED:

- 8260FAB REQUIRES ETBE TO BE TESTED
- 8260FAB REQUIRES TAME TO BE TESTED
- 8260FAB REQUIRES DIPE TO BE TESTED
- 8260FAB REQUIRES TBA TO BE TESTED
- 8260FAB REQUIRES DCA12 TO BE TESTED
- 8260FAB REQUIRES EDB TO BE TESTED
- 8260FAB REQUIRES ETHANOL TO BE TESTED

LAB NOTE DATA QUALIFIERS

## QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS 0 METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS 0 DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? - LAB METHOD BLANK Υ

- MATRIX SPIKE N - MATRIX SPIKE DUPLICATE Ν

- BLANK SPIKE SURROGATE SPIKE - NON-STANDARD SURROGATE USED

N

Ν

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Confirmation Number: 9125445902

**Date/Time of Submittal:** 10/19/2005 3:40:59 PM

Facility Global ID: T0607700895 **Facility Name: MBP LINDEN** 

**Submittal Title:** 07-18-2005 remediation vapor Submittal Type: Remediation O & M Reports

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MBP LINDEN Regional Board - Case #: 391080

8203 HWY 26 E CENTRAL VALLEY RWQCB (REGION 5S) - (JLB) STOCKTON, CA 95206 Local Agency (lead agency) - Case #: 000691

SAN JOAQUIN COUNTY LOP - (ML)

**QUARTER** CONF# 9125445902 07-18-2005 remediation vapor Q3 2005

SUBMITTED BY SUBMIT DATE **STATUS** 

Christopher Miller 10/19/2005 PENDING REVIEW

#### SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED 2 # FIELD POINTS WITH DETECTIONS 0 # FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL

SAMPLE MATRIX TYPES AIR - UNK. ORIGIN

## METHOD QA/QC REPORT

METHODS USED 8260FAB,M8015 TESTED FOR REQUIRED ANALYTES?

MISSING PARAMETERS NOT TESTED:

- 8260FAB REQUIRES ETBE TO BE TESTED
- 8260FAB REQUIRES TAME TO BE TESTED
- 8260FAB REQUIRES DIPE TO BE TESTED
- 8260FAB REQUIRES TBA TO BE TESTED - 8260FAB REQUIRES DCA12 TO BE TESTED
- 8260FAB REQUIRES EDB TO BE TESTED
- 8260FAB REQUIRES ETHANOL TO BE TESTED

LAB NOTE DATA QUALIFIERS N

#### QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS 0 METHOD HOLDING TIME VIOLATIONS 0 LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT 0 LAB BLANK DETECTIONS 0 DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING? Υ

- LAB METHOD BLANK

- MATRIX SPIKE N - MATRIX SPIKE DUPLICATE Ν Ν - BLANK SPIKE

SURROGATE SPIKE - NON-STANDARD SURROGATE USED

WATER SAMPLES FO	PIKE DUPLICATE(S) % RECOV	TEDV DETWEEN 4E 12E0/	n/a
	• • • • • • • • • • • • • • • • • • • •		n/a
	IKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		,
	RROGATE SPIKES % RECOVERY BETWEEN 85-115% ANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
0011 044101 50 500	000 <i>11</i> 0000 055150		
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	ERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a	
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%		n/a	
FIELD QC SAMPLES			
SAMPLE	COLLECTED	DETECTIONS >	REPDL
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	

WATER SAMPLES FO MATRIX SRIKE / MATRIX S	PIKE DUPLICATE(S) % RECOV	FDV RFTWFFN 65-135%	n/a
	` '		n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% SURROGATE SPIKES % RECOVERY BETWEEN 85-115%		n/a	
	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
SOIL SAMPLES FOR	8021/8260 SERIES		
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%		n/a	
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%		n/a	
SURROGATE SPIKES % RECOVERY BETWEEN 70-125%		n/a	
BLANK SPIKE / BLANK SPI	KE DUPLICATES % RECOVERY	BETWEEN 70-130%	n/a
FIELD QC SAMPLES			
<u>SAMPLE</u>	COLLECTED	<u>DETECTIONS &gt;</u>	REPDL
QCTB SAMPLES	N	0	
QCEB SAMPLES	N	0	